Joseph M. Thorson

WEST CHESTER STATE COLLEGE

BULLETIN

GRADUATE STUDIES

1968-1969 SESSIONS

WEST CHESTER STATE COLLEGE

IS ACCREDITED BY

THE MIDDLE STATES ASSOCIATION OF COLLEGES

AND SECONDARY SCHOOLS,

THE NATIONAL COUNCIL FOR ACCREDITATION

OF TEACHER EDUCATION,

THE AMERICAN ASSOCIATION FOR HEALTH,

PHYSICAL EDUCATION, AND RECREATION,

AND THE

NATIONAL ASSOCIATION OF SCHOOLS OF MUSIC.

THE COLLEGE IS AUTHORIZED BY THE

STATE BOARD OF EDUCATION TO OFFER GRADUATE

PROGRAMS AND TO AWARD THE MASTER'S DEGREE.

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Graduate Studies

Leading to the

Master of Education Degree

in

Biology
Chemistry
Elementary Education
English
French
Geography
German
Guidance
Health & Physical Education
Latin
Mathematics
Music Education
Physical Science
Physics
Social Science
Spanish

And

Certification only in Audio-Visual Education
(M.Ed. Degree pending D.P.I. approval)

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WEST CHESTER, PENNSYLVANIA
19380

All Programs are Approved Programs Leading to Certification

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I. WEST CHESTER STATE COLLEGE

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- LOCATION

HISTORY OF THE COLLEGE

West Chester State College traces its history back to the early years of the nineteenth century. The College had its origin with the founding of the West Chester Academy in 1812. In 1871, the Academy became the West Chester Normal School, devoted to the preparation of teachers. When, in 1927, the Normal School was broadened to become the State Teachers College, the four-year program of teacher training was instituted. Still another milestone was marked on January 8, 1960, when the Pennsylvania State Legislature again enlarged the stature of the College, naming it the West Chester State College. This action opened the door for the College to become a multi-purpose institution. Currently the College offers the B.S., the B.A., and the M.Ed., Degrees. It plans to offer the M.A. Degree in most academic fields, M.S. in some academic fields in the future.

Historically, the College has held as its primary objective the preparation of teachers for the public schools of Pennsylvania. West Chester offers the degree of Bachelor of Science in Education with majors in four basic curricula —Elementary, Secondary, Music, and Health and Physical Education — plus degree curricula for Public School Nurses and Dental Hygienists. The College has also instituted a program of courses designed to meet certification requirements for the teaching of mentally retarded and physically handicapped children.

In addition, West Chester maintains an extensive two-track program for teachers-in-service. One phase consists of evening and Saturday courses for those desiring to satisfy various professional needs, including certification requirements. The other phase consists of a graduate program leading to a Master of Education Degree in the following fields: elementary education, guidance counseling, audio-visual education (materials instruction specialist**), music education, health and physical education, and secondary education with specializations in English, social sciences, biology, Latin, French, German, Spanish, Mathematics, chemistry, physics, physical science, and geography.

The second major objective of the College program is to provide a liberal college education for the youth of the Commonwealth. To this end, the College has been officially approved by the State Council of Education for the purpose of offering a liberal arts program in the areas of humanities, social sciences, geography, natural sciences, and mathematics.

The various programs at West Chester are comprehensive, designed to satisfy the intellectual, physical, and spiritual needs of all students. A wide span of extra-curricular activities — lectures, concerts, entertainments, and religious club programs — affords each student an opportunity to develop wholesome personality and character traits, to expand his talents, and to seek the fullest expression of his potential capacities.

**Certification only. (M.Ed. Degree pending D.P.I. approval)

LOCATION OF THE COLLEGE

West Chester State College is located in West Chester, the county seat of Chester County, Pennsylvania, a picturesque town of 16,000 in the heart of a vital suburban area of Greater Philadelphia.

The town, as well as the county, is rich in historic and cultural tradition. The residents of the region cherish and preserve their heritage which traces back to William Penn's landing along the Delaware River. The College, in turn, reflects the charm of a culture deeply influenced by the Society of Friends.

Within a short distance of the campus are the famous Longwood Gardens and the battlefields of Valley Forge and Brandywine. Both Philadelphia, 25 miles to the east, and Wilmington, Delaware, 15 miles to the south, are easily accessible by train, bus, or car.

West Chester can be reached easily from the Pennsylvania Turnpike exit at Downingtown. Route 100 south from Downingtown goes directly to the campus in the 700 block of South High Street in West Chester.

The College may also be reached by the following public transportation:

Train—via the Pennsylvania Railroad, which operates an extension from Philadelphia to West Chester. A timetable should be consulted Passengers coming from the north may also connect with trains to Paoli at either the 30th Street or the Suburban station in Philadelphia, and change at Paoli to a Short Line bus from Paoli station to West Chester, a trip of nine miles. Similarly, Pennsylvania Railroad passengers coming from the west should get off at Paoli and proceed by bus.

Bus—Red Arrow Line buses connect with the Philadelphia Market Street Subway at the 69th Street terminal. Short Line buses also provide frequent service between Wilmington and West Chester, and the same bus system connects at the Downingtown and Coatesville bus terminals with Greyhound buses coming from the west. Locally, there is Short Line bus service throughout the day and evening for the trip of approximately a mile from the West Chester bus terminal to the College.

GRADUATE STUDIES CALENDAR

SUMMER SESSION — 1968

May 4 (Sat.) Lawrence Hall (8:00 A.M.-12 P.M.) Registration, Summer
May 24—All Summer Session Registration Fees must be paid by this date.
June 1 (Sat.) Lawrence Hall (8:00 A.M.-12:00 Noon) *Late Registration Pre-Session
June 3 to 21 ..... Classes, Pre-Session
June 24 (Mon.) Lawrence Hall (8:00 A.M.-12:00 Noon) *Late Registration, Regular Session
June 25 (Tues) (8:00 A.M.) ..... Classes Begin
August 2 (Fri.) ..... Classes End
August 5 (Mon) Lawrence Hall (8:00 A.M.-12:00 Noon) *Late Registration, Post Session
August 6 (Tues) (8:00 A.M. ..... Classes Begin
August 23 (Fri.) ..... Classes End

* All Late Registrations — $10.00 Late Fee.

FALL SESSION — 1968

July 27 (Sat.) Lawrence Hall (8:00 A.M.-12:00 Noon) Registration, Fall
August 23—All fall semester Registration Fees must be paid by this date.
September 7 (Sat.) Lawrence Hall (8:00 A.M.-12:00 Noon) *Late Registration, Fall
September 9 (Mon.) ..... Classes Begin
November 26 (Tues.) (Close of Classes) ..... Thanksgiving Recess Begins
December 3 (Tues.) (8:00 A.M.) ..... Thanksgiving Recess Ends
December 7 (Sat.) Lawrence Hall (8:00 A.M.-12:00 Noon) Registration, Spring
December 21 (Sat.) (Close of Classes) ..... Christmas Recess Begins
January 6 (Mon.) (8:00 A.M.) ..... Christmas Recess Ends
January 6—All spring semester Registration Fees must be paid by this date.
January 16 to 24 ..... Final Exams
January 25 (Sat.) ..... Semester Ends

* All Late Registrations — Late Fee will be charged.

SPRING SESSION — 1969

January 25 (Sat.) Lawrence Hall (8:00 A.M.-12:00 Noon) *Late Registration, Spring
January 27 (Mon.) ..... Classes Begin
March 15 (Sat.) (Close of Classes) ..... Spring Recess Begins
March 24 (Mon.) (8:00 A.M.) ..... Spring Recess Ends
April 3 (Thurs.) (Close of Classes) ..... Easter Recess Begins
April 8 (Tues.) (8:00 A.M.) ..... Easter Recess Ends
May 15 to 23 ..... Final Exams
May 19—All Summer session Registration Fees must be paid by this date.
May 24 (Sat.) ..... Alumni Day
May 25 (Sun.) ..... Commencement

* All Late Registrations — Late Fee will be charged.

SUMMER SESSION — 1969

May 3 (Sat.) Lawrence Hall (8:00 A.M.-12:00 Noon)
Registration, Summer

May 19—All summer session Registration Fees must me paid by this date.

May 31 (Sat) Lawrence Hall (8:00 A.M.-12:00 Noon)
*Late Registration, Pre-Session

June 2 to 20 ..... Classes, Pre-Session

June 23 (Mon.) Lawrence Hall (8:00 A.M.-12:00 Noon)
*Late Registration, Regular Session

June 24 (Tues.) (8:00 A.M.) ..... Classes Begin

August 1 (Fri.) ..... Classes End

August 4 (Mon.) Lawrence Hall (8:00 A.M.-12:00 Noon)
*Late Registration Post Session

August 5 (Tues.) (8:00 A.M.) ..... Classes Begin

August 22 (Fri.) ..... Classes End

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* All Late Registrations — Late Fee will be charged.

1968 — 1969

DEAD LINE DATES

For Graduate Students Who Plan To Graduate In May

January 27 ..... Last day to submit final grades for the Fall Semester to the Graduate Office.

February 10 ..... All class rolls for the Spring Semester are due in the Graduate Office.

March 1 ..... Last day for filing letter of intent to graduate in the May commencement. Diploma fee must be paid at this time.

April 1 ..... All names of students graduating must be approved by the department chairmen. None will be approved after this date.

April 15 ..... Last day in which department chairmen may remove names of students unable to graduate in May.
Last day for candidates who are graduating in May to take the final comprehensive examinations.

Last day to submit Thesis or Research Report in final form to the Graduate Office. There must be three copies of Thesis and Research Report accompanied by an abstract. All copies must be bound. The fees for binding with spine stamping, to include title, student's name and date, are as follows:

$3.45 per copy
6.30 per copy if volume is over one inch in thickness.

May 5 ..... Deadline date for assuring the graduate Office that the graduate student who expects to receive the Master's degree in the May commencement will receive a grade of "C" or better in all course work taken during this semester.

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Schick, Robert D., B.S., M.A., A.Mus.D. ..... Professor of Piano and History and Literature of Music

Sheppard, Jane, B.Mus., M.A. ..... Associate Professor of Voice and Choral Music

Sweet, Roy D., B.S., M.Mus. ..... Chairman, Department of Voice and Choral Music Associate Professor

Veleta, Richard K., B.Mus., M.Mus., D.Mus. ..... Associate Professor of Piano

Whitten, W. Benjamin, B.Mus., M.Mus. ..... Associate Professor of Piano and History and Literature of Muic

Wilkinson, Harry, B.S., Ed.M., Ph.D. ..... Professor of Organ and Theory of Music

Williams, Lois, B.Mus., M.A. ..... Associate Professor of Choral Music and History and Literature of Music

Wright, James J., B.S., Ed.M., Ph.D. ..... Chairman of the Department of Theory and Composition, Professor

III. THE GRADUATE PROGRAM

- Graduate Studies Program
- Division of Graduate Study
- Objectives
- Administration
- Admission
- Admission Requirements
- Curricula

GRADUATE STUDIES PROGRAM

The present program was authorized by the State Board of Higher Education of the Commonwealth of Pennsylvania, effective on September 1, 1959.

The Master's Degree is awarded upon successful completion of all requirements, and because these vary from one curriculum to another, the student should check carefully the requirements listed under the department in which he is enrolled.

DIVISION OF GRADUATE STUDIES

Graduates of fully accredited colleges and universities may pursue courses of study leading to the Master's Degree in the areas of elementary education, secondary education, health and physical education, and music education. A student majoring in secondary education may choose a field of specialization in biology, chemistry, English, foreign languages (French, Spanish, Latin, and German), geography, mathematics, physical science, physics, social science, audio-visual education,* or guidance. All inquiries concerning graduate study should be directed to the Dean of Graduate Studies.

OBJECTIVES OF THE GRADUATE PROGRAM

The graduate program has one major purpose: to increase the competence of the individual's academic discipline and/or professional education.

This program will:

1. Permit the teacher to earn the Master's Degree without interference with normal professional duties.
2. Permit the in-service teacher to secure permanent certification and to extend the present certification.
3. Provide the in-service teacher with the opportunity to improve his academic or professional position.
4. Provide students with an opportunity to pursue graduate study under well-trained and experienced teachers.
5. Provide courses for professional growth for those who do not choose to attain the Master's Degree.
6. Provide an opportunity for those who do not plan to pursue teaching as a career, but wish to attain the Master's Degree. (See department requirements)

ADMINISTRATION

The graduate program is under the direction of the administrative officers of the College, the Academic Council of the College, the Graduate Council, and administrative officers of the graduate program.

The Graduate Council performs the following functions: It establishes all major policies for the administration of the program; reviews all requests for special consideration, and recommendations of the major departments; and acts as the Executive Council for the college administration on all matters related to the graduate program.

The administrative officers of the graduate program are the Dean of Graduate Studies, Assistant to the Dean of Graduate Studies, the Graduate Council and the co-ordinators of the graduate program. The faculty advisors in the graduate program function directly under their respective department chairman. Graduate students having problems in their major field should first consult their advisors who, in turn, consult with the department chairmen or co-ordinators involved.

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* Approved Program for Certification Only. (M.Ed. Degree pending D.P.I. approval)

ADMISSION TO THE DIVISION OF GRADUATE STUDIES

The Division of Graduate Studies admits applicants who produce evidence of graduation from a college or university accredited by its national, regional, and professional accrediting agencies. Applicants' undergraduate records must also indicate a potential for success at the graduate level.

ADMISSIONS TO GRADUATE STUDIES AT THE COLLEGE ARE BASED ON THE ACADEMIC QUALIFICATIONS OF THE RESPECTIVE APPLICANTS AND ARE MADE WITHOUT REGARD TO RACE, COLOR, CREED, OR NATIONAL ORIGIN OF THE INDIVIDUALS.

The Dean of Graduate Studies may admit students to the Division of Graduate Studies for varying purposes, among them:

1. To qualify for the Master's Degree
2. To meet certification requirements
3. To establish credit for other reasons
4. To gain personal growth without credit (Audit)

Application forms and bulletins are available from the Graduate Office.

ADMISSION REQUIREMENTS

Applicants for admission to Graduate Study will be identified as degree or non-degree students. Regardless of this identification, the applicant should initiate his application for graduate study.

PROCEDURE FOR GAINING ADMISSION TO GRADUATE CLASSES

A. Each applicant should file with the Dean of Graduate Studies an application for admission to graduate classes at least three weeks prior to the session in which he wishes to begin his graduate program. Application forms may be obtained by writing to the Graduate Office.

B. Two official transcripts of the applicant's undergraduate and — if he has done prior work at the graduate level — his graduate record must be sent to the Dean of Graduate Studies. It is not necessary to submit an undergraduate transcript for work taken at West Chester State College. The over-all quality point average of the applicant's undergraduate work must be 2.0 or better (based on a 4-point scale where A=4).

C. When submitting his application, the applicant should request an appointment for a personal interview with the Dean of Graduate Studies.

D. A fee of $10.00 will be charged for application for graduate work at West Chester. **This fee is not refundable.**

APPLICANTS FOR DEGREE STUDIES

I. REQUIREMENTS FOR ADMISSION TO DEGREE STUDIES

In addition to the requirements as listed for admission to graduate classes, the student must have an over all undergraduate quality point average of 2.5 or better and 2.75 in major field of Concentration (based on a 4 point scale where A=4) and meet all requirements of the department concerned.

II. REQUIREMENTS FOR ADMISSION TO DEGREE CANDIDACY

Graduate students who wish to be admitted to candidacy for the Master of Education Degree must:

A. File with the Dean of Graduate Studies an official application for admission to Degree candidacy. Official application forms may be obtained in the Graduate Office. Students who are admitted to take graduate work at West Chester State College should not assume automatic admission to Degree candidacy.

B. Have completed not more than 15 hours of graduate work at the time of making application for Degree Candidacy. These hours must include a minimum of required courses in the area of concentration as established by the department concerned.

The student's application form will be evaluated by the department and the student will be informed by the Dean of Graduate Studies of his (1) unconditional acceptance, (2) conditional acceptance; or (3) rejection. He will then contact the department in regard to the conditions of his admittance to candidacy.

C. Have maintained an over all grade point average of not less than 2.75 in all graduate courses and have maintained an average of B in the courses in the area of concentration.

D. Have achieved a satisfactory score on the Graduate Record Examinations. (Refer to section on Examinations.)

E. Obtain approval of the Dean of Graduate Studies and the department concerned. **(The college reserves the right to refuse admission to candidacy without being required to give reasons in writing.)**

F. Show evidence of academic, personal, and professional qualities deemed acceptable by the administrators of the graduate program and the department concerned.

On the basis of the personal interview and data at hand, the Dean or Department Chairman will draw up a program of studies to be followed by the student. It will include undergraduate deficiencies, if any, as well as minimum requirements in general education, professional education, and area of concentration.

An advisor will be appointed to direct the graduate work of each student. Generally this will be the chairman of the major department, or a member of the graduate faculty of that department, designated by the chairman. **It is the student's responsibility to submit a written request for an advisor.** Such requests should be directed to the chairman of the department concerned.

APPLICANTS FOR NON-DEGREE STUDIES

A. APPLICANTS FOR CREDIT WORK

(An applicant for credit work is one who desires to take courses for credit toward certification or for some other valid reason.)

The applicant must:

1. Be a college graduate.
2. Make application for credit work.
3. Submit two official transcripts of his undergraduate record. They must bear the college seal.
4. Be able to demonstrate his academic competence to the chairman of the major department and the Dean of Graduate Studies.
5. Show evidence of prerequisite undergraduate work of creditable quality.
6. Have a personal interview and show evidence of professional promise.

B. SPECIAL STUDENTS

A special student is one who does not fall within any of the above categories. Instances of special students are:

1. The student who is taking work for his own edification.
2. The student who is undecided on his final goal.
3. The student who is taking work to be transfered to another institution.

(As a courtesy extended by the college, the application fee is not required of those students taking graduate work leading to a degree at another Commonwealth State College.)

4. The student who has a Master's Degree and is taking further graduate work. In place of official college transcripts, a letter stating the student's record may be submitted by the college from which he obtained his degree.

C. AUDITORS (non-credit)

An auditor is one who, as the term implies, takes courses as a listener. No graduate credit of any type will be given for courses audited. The auditor must make formal application to take graduate work, and he is required to pay the same fee as those who are taking courses for credit. It is not necessary for the auditor to submit official transcripts of work taken previously.

A student will be admitted as an auditor subject to the approval of the department chairman.

A student who registers to take a course for credit may change his status to that of an auditor if he makes this request in writing to the Dean of Graduate Studies prior to the sixth meeting of the class. This request must be made on an official form which may be obtained in the graduate office.

III. APPLICANTS FOR ADVANCED STANDING

An applicant for advanced standing is one who desires to transfer credits from another graduate school.

Such credits will be honored under the following conditions:

A. The credits must have been earned at an approved graduate school.

B. The maximum number may not exceed six. All requirements beyond these six credits must be satisfied at West Chester State College.

C. The transfer course grades must be B or better.

D. The courses involved must be essentially the same as graduate courses offered at this institution and must be approved by the major Graduate Department.

TRANSCRIPTS MUST BE CLEARLY MARKED THAT THE COURSES INVOLVED ARE GRADUATE COURSES.

E. Transfer of credits must fall within the required six year time limit as required for the Master's degree.

PLEASE NOTE: APPLICANTS FAILING TO QUALIFY AS DEGREE CANDIDATES BECOME NON-DEGREE STUDENTS. After they have demonstrated competence by earning a B average in the first five graduate courses, (two required courses of all curricula and at least two courses in the major field of concentration), they may reapply to become degree candidates. Such admission is not automatic.

SUMMARY OF REQUIREMENTS FOR THE MASTER'S DEGREE

The Master's Degree will be granted upon:

1. Unrestricted admission to candidacy for the Degree.
2. Submission and approval of the professional research thesis in the thirty credit program or satisfactory completion of the thirty-four credit program.
3. Completion of all graduate courses with an over all quality point average of 2.75, an average of B in the area of concentration, and achievement of satisfactory scores on the Graduate Record Examination. (See department requirements.)

4. Satisfactory performance on a final oral and/or written comprehensive examination conducted by the student's advisory committee in the field of specialization.

5. Evidence of successful teaching experience as approved by the Chairman of the Department in which the graduate student is enrolled. Other experience in lieu of this requirement must be approved by the Graduate Council.

6. Meeting all required deadline dates. (Refer to calendar.)

THE MASTER OF EDUCATION DEGREE

COURSE REQUIREMENTS

To obtain a degree of Master of Education, the student must complete a minimum of thirty (30) semester hours of credit in the Thesis Program or thirty-four (34) semester hours of credit in the Non-Thesis Program. The student, however, should not think of the Master's Degree in terms of semester credits. He should think, rather, in terms of meeting the standards established by the Graduate Council and by his major department.

At all times it is advisable for the student to keep in contact with the Dean of Graduate Studies and his advisor.

The requirements stated below are the broad general requirements established by the Graduate Council. In addition to these requirements, each department has individual requirements. The student, therefore, should first familiarize himself with the requirements below. Then he should turn to the specific section in this bulletin which treats the requirements established by his major department.

	Semester Credits
I. Required Courses	7-9
Hum 500 Humanities*	2
EdF 510 Educational Foundations	3
Res 500 Methods and Materials of Research	2
Methods Course such as Modern Techniques in Teaching of —etc.—	2

THESIS PROGRAM (30 s.c.)

II. Area of Concentration	16-20
A. Required Courses in Major Field.	
B. Electives under advisement	
III. Research	3-5
A. Thesis (610)	3
B. Seminar	0-2

NON-THESIS PROGRAM (34 s.c.)

II. Area of Concentration	23-27
A. Required Courses in Major Field	
B. Electives under advisement	
III. Research	0-2
A. Research Report (600)	0-2
B. Seminar or Supporting Electives	0-2

* All graduate students beginning graduate work for the first time may waive this requirement with permission of the department chairman.

COURSE OFFERINGS

ALL CURRICULA

Semester Credits

Hum 500 Humanities 2

This is is a composite course composed of three major fields of subject matter:

1. Art and Architecture 2. Music 3. Literature. This material is closely correlated to show the relationship of the three fields to each other and to the central theme of a general philosophy connecting these fields of life. The professors teaching this course develop specific material in concert to establish an over-all unity.

Prerequisite: Res 500

EdF 510 Educational Foundations 3

The history of education; factual history integrated with educational philosophy and thought; the evolution of present day educational theory and issues from early times.

Res 500 Methods and Material of Research 2

A course designed to acquaint the student with the basic techniques and procedures in research. This course treats the major types of research and the methods for locating, evaluating, and interpreting evidence. It also includes the actual preparation of a research outline. It is given by curriculum, to meet the needs of the specific fields. In some cases (as indicated below) the course has been assigned a symbol pertaining to the field. In other cases, the symbol remains Res 500.

Res 500 Methods and materials of Research (EdE)
Res 500 Methods and Materials of Research (Sec)
Res 500 Methods and Materials of Research (PeD)
Res 500 Methods and Materials of Research (Math)
Res 500 Methods and Materials of Research (Mus)
Res 500 Methods and Materials of Research (ScS)
Res 500 Methods and Materials of Research (Lan)
Res 500 Methods and Materials of Research (Geo)
Res 500 Methods and Materials of Research (EdM)
Res 500 Methods and Materials of Research (EdC)
Res 500 Methods and Materials of Research (Chem)

BIOLOGY

Candidates for the Master's Degree in this field must meet the general requirements stated below:

Minimum requirements before admission to candidacy is granted are two semesters of general college chemistry, one semester of organic chemistry, and at least an undergraduate minor of 18 semester hours in the field of biological science. All undergraduate deficiencies must be met prior to filing for degree candidacy. (These deficiencies must be met before fifteen graduate credits are completed.)

Semester Credits

I. Required Courses 7-9

Hum	500 Humanities*	2
EdF	510 Educational Foundations	3
Res	500 Methods and Materials of Research	2
Bio	503 Modern Techniques of Teaching Biology	2

* All graduate students beginning their graduate work for the first time may waive this requirement with permission of the department chairman.

THESIS PROGRAM (30 s.c.)

	Semester Credits
II. Area of Concentration	16-20
III. Research	3-5
Bio 610 Research Thesis	3
Bio 599 Seminar	0-2

NON-THESIS PROGRAM (34 s.c.)

II. Area of Concentration	23-27
III. Research	0-2
Bio 600 Research Report	0-2
Bio 599 Seminar	0-2

Course Offering

A. Recommended Electives		9
**Bio 501 Introduction to Biochemistry for Teachers	3	
Bio 516 Physiology of Plants	3	
**Bio 522 Ecology for Teachers	3	
**Bio 525 Experimental Physiology for Teachers	3	
Bio 530 Genetic Theory	3	

	Non-Thesis	*Thesis*
B. Electives (under advisement)	14-18	7-11
Bio 511 Systematic Botany	3	
Bio 512 Plant Growth	3	
Bio 513 Limnology	3	
Bio 514 Plant Pests and Diseases	3	
Bio 517 Advanced Plant Anatomy and Morphology	3	
Bio 524 Experimental Biology	3	
Bio 526 Biochemistry I	3	
Bio 527 Biochemistry II	3	
Bio 532 Experimental Genetics	3	
Bio 533 Advanced Embryology I	3	
Bio 534 Advanced Embryology II	3	
Bio 538 Systematic Zoology	3	
Bio 539 Insect Morphology	3	
Bio 541 Economic Entomology	3	
Bio 542 Animal Ecology	3	
Bio 543 Freshwater Biology	3	
Bio 545 Developmental Anatomy	3	
Bio 546 Microtechniques I	3	
Bio 547 Microtechniques II	3	
Bio 561 Human Heredity	3	
Bio 571 Advanced Bacteriology	3	
Bio 573 Animal Histology	3	
Bio 575 Mycology I	3	
Bio 576 Mycology II	3	
Bio 591 History of Biology	3	

**Provides excellent background for teaching of the B.S.C.S. Versions.

CHEMISTRY

	Semester Credits
I. Required Courses	7-9
Hum 500 Humanities*	2
EdF 510 Educational Foundations	3
Che 500 Methods and Materials of Research	2
Che 502 Modern Trends in Teaching Chemistry	2

THESIS PROGRAM (30 s.c.)

II. Area of Concentration	16-20
A. Required Courses	12
Che 511 Advanced Inorganic Chemistry	3
Che 521 Advanced Analytical Chemistry	3
Che 531 Advanced Organic Chemistry	3
Che 541[1] Special Topics in Physical Chemistry	3
B. Elective (under advisement)	4-8
Che 501 History and Philosophy of Chemistry	1
Che 503 Chemical Literature	1
Che 504 Glass Manipulation Techniques	1
Che 513 Principles of Geochemistry	3
Che 517 Mineralogy for Teachers	3
Che 522 Instrumental Methods of Analysis	3
Che 523 Industrial Chemistry Processes	3
Che 533 Physical Organic Chemistry	3
Che 535 Qualitative Organic Analysis	3
Che 538 Organic Preparations	2
Che 540 Advanced Physical Chemistry	3
Che 545 Chemical Thermodynamics	2
Che 551 Chemistry of Coordination of Comp's	3
Che 561 Nuclear and Radiochemistry	2
Che 563 Electrochemistry	3
III. Research	3-5
A. Che 610 Thesis	3
B. Che 591 Seminar	0-2

NON-THESIS PROGRAM (34 s.c.)

II. Area of Concentration	23-27
A. Required	12
Che 511 Advanced Inorganic Chemistry	3
Che 521 Advanced Analytical Chemistry	3
Che 531 Advanced Organic Chemistry	3
Che 541[1] Special Topics in Physical Chemistry	3

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* All graduate students taking graduate courses for the first time may waive this requirement with permission of the Dept. Chairman.

1 Those who have completed an undergraduate Physical Chemistry course take Che 540.

		Semester Credits
B.	Electives (under advisement)	11-15
	Che 501 History and Philosophy of Chemistry	1
	Che 513 Principles of Geochemistry	3
	Che 515 Inorganic Preparations	2
	Che 517 Mineralogy for Teachers	3
	Che 522 Instrumental Methods of Analysis	3
	Che 523 Industrial Chemistry Processes	3
	Che 533 Physical Organic Chemistry	3
	Che 535 Qualitative Organic Analysis	3
	Che 538 Organic Preparations	2
	Che 540 Advanced Physical Chemistry	3
	Che 545 Chemical Thermodynamics	2
	Che 551 Chemistry of Coordination of Comp's	3
	Che 561 Nuclear and Radiochemistry	2
	Che 563 Electrochemistry	3
III.	Research	0-2
	Che 581 Research Report	0-2
	Che 591 Seminar	0-2

EDUCATION

(Electives Open to All Fields)

The School of Education offers professional courses for students of all curricula. In this capacity, it will offer the electives listed below.

			Semester Credits
EdS	502	Secondary School Curriculum	2
EdS	506	The Junior High School	2
EdS	508	The Core Curriculum	2
EdF	509	Contemporary Teaching Trends	2
EdF	520	Comparative Education	3
EdS	524	Supervision and Student Teaching	3
EdM	540	In-Service Education Seminar	2
EdM	541	Creative Teaching	2
EdU	542	Curriculum Development for Culturally Disadvantaged Children	2
EdP	550	Advanced Educational Psychology	3
EdS	566	The Activity Program in the Secondary School	2
EdF	580	History and Philosophy of Education	3
EdM	581	The Motion Picture in Education	2
EdM	584	History, Philosophy and Psychology of Audio-Visual Education	2
EdF	590	School Law	2
EdC	564	Homeroom Guidance	2
EdC	567	Group Guidance	2
Psy	557	Psychology of Adjustment	2
EdA	570	Psychology of Mentally Atypical Children	2
EdA	571	Methods and Materials for Mentally Atypical Children (Elementary)	2
EdA	574	Methods and Materials for Mentally Atypical Children (Secondary)	2
EdA	575	Psychology of Physically Atypical Children	2

			Semester Credits
EdA	576	Methods and Materials for Physically Atypical Children	2
EdA	540	Workshop in Special Education	4
EdU	501	Curricular Adaptations for the Culturally Disadvantaged	3
EdU	502	Human Relations and the Community	3

AUDIO-VISUAL EDUCATION

*Educational Media Specialist

Approved Program for Certification

Graduate courses in Audio-Visual Education are designed to lead students to certification as an Educational Media Specialist. Certificates will be granted students who complete the following requirements:

1. Hold a permanent certificate valid for elementary or secondary education.
2. Complete a minimum of 24 semester hours in the curriculum of Educational Media and related subjects as outlined.

Any student seeking permanent college certification and/or working toward a Master's Degree within the graduate school may, with the approval of his advisor, his department chairman, and the chairman of the Department of Educational Media, elect up to ten semester hours from the Educational Media curriculum. These credits may then be applied toward certification as an Educational Media Specialist. If permission is not granted by the student's major area for him to take the necessary hours of work during his degree program, the additional credits must be taken in addition to the requirements for the Master's Degree. Students not in the educational profession (i.e., business or industry) and who otherwise meet the admission requirements for graduate school may pursue the program for Educational Media Specialist.

A student who presents proof of competency in one or more of the basic courses in the curriculum may, with the approval of his advisor and the department chairman, elect another course from the Educational Media curriculum or from some other curriculum in the College. A minimum of two semester hours required for certification should be taken in an internship program as approved by the College.

Every student enrolled in the program must, with the approval of his advisor, the department chairman, and the Dean of Graduate Studies select at least one course in each of the four following areas:

1. Learning theory relative to Educational Media and Communications.
2. Fundamentals of library science.
3. Production and utilization of Educational Media.
4. Organization and operation of Educational Media Centers.

1. *Required Courses*

			Semester Credits
EdM	523	Production of Projected Still Materials	3
		OR	
EdM	521	Production of Non-Projected Materials	3
EdM	502	Selection and Effective Utilization of Audio-Visual Media	2
		OR	
EdM	511	Programmed Instruction and Teaching Machines	3
EdM	560	Organization and Administration of the Audio-Visual Program	2
EdM	519	Library Science	2
EdM	590	Internship in Instructional Media	2
EdM	555	Learning Theories Related to Educational Media	2

* The awarding the M.Ed. depending approval by the D.P.I.

II. *Electives* (By advisement only)

			Semester Credits
EdM	508	Audio-Visual Materials in the Elementary School	2
Edm	525	Photography for Teachers	3
EdM	533	Television in Education for Teachers	3
EdM	509	Audio-Visual Materials in the Secondary School	2

III. Free Electives in Education (On Advisement)

ELEMENTARY EDUCATION

Candidates for the Master's degree with a major in elementary education are expected to be students who are or plan to become elementary school teachers, or who have other reasons for pursuing this program that are acceptable to the Department of Elementary Education. Since this degree should represent a broad knowledge of the major field, students whose undergraduate major was *not* elementary education may be required — at the discretion of the Department of Elementary Education — to take additional course work in excess of the minimum credit hour requirements.

Degree candidates in elementary education must meet the course requirements outlined below, which include the general requirements for all curricula and the specific departmental requirements. In addition, each student must be prepared to take any course deemed necessary by the Department of Elementary Education, either within or beyond these requirements.

Admission to the Master's degree program is contingent on a satisfactory academic record and on departmental approval. Unconditional admission to degree candidacy is granted only if the student's undergraduate average is no less than 3.00, and his graduate average no less than 2.75. Conditional admission may be granted to a student whose undergraduate average is below 3.00 only if he has demonstrated the ability to do acceptable graduate work.

Admission to the Comprehensive Examination (given in February and July of each year) is granted only if a student meets all of the following requirements:

1. Unconditional admission to degree candidacy, including satisfactory performance on the Graduate Record Examination.
2. An academic average of no less than 2.75 in graduate course work.
3. Completion of no less than 28 credits (a) by the end of the fall semester for the February examination or (b) by the end of the spring semester for the July examination.
4. Completion of all required courses (a) by the end of the fall semester for the February examination or (b) by the end of the spring semester for the July examination.

Applications for admission to the Comprehensive Examination are available from the Department of Elementary Education. Applications must be filed by December 1 for the February examination or by May 1 for the July examination.

Candidates who do not pass this examination the first time are permitted one re-examination after an interval of not less than one year and not more than two years. Candidates who do not pass this re-examination are automatically dropped from the degree program in elementary education.

These regulations concerning the Comprehensive Examination apply both to students currently enrolled in the degree program and to potential degree candidates.

			Semester Credits
I. Required Courses			7-9
Hum	500	Humanities*	2
Res	500	Methods and Materials of Research (Elem.)	2
EdF	510	Educational Foundations	3
EdE	500	Introduction to Graduate Study in Elem. Ed.**	2

II. ***Area of Concentration

Thesis Program	21-23
Non-Thesis Program	25-27

A. Program for degree candidates whose undergraduate major was elementary education.

Required			10
EdE	514	Reading in the Content Areas	2
EdE	547	Elementary School Curriculum	2
EdP	550	Advanced Educational Psychology	3
EdP	553	Child Development and Behavior II	3

Electives (To be chosen under advisement)

Thesis Program	11-13
Non-Thesis Program	15-17

B. Program for degree candidates who are certified to teach but whose undergraduate major was *not* elementary education. (NOTE: Thesis program is not recommended for these candidates.)

Required			21
EdE	505	The Teacher in the Elementary School	2
EdE	510	Foundations of Reading Instruction	3
EdE	514	Reading in the Content Areas	2
EdE	522	Teaching the Communication Skills	2
EdE	530	Social Studies in Elementary Education	2
EdE	547	Elementary School Curriculum	2
EdP	550	Advanced Educational Psychology	3
****EdP	551	Child Development and Behavior I	3
Mat	555	Modern Techniques of Teaching Elem. School Mathematics	3
Electives (To be chosen under advisement)			2-6

III. Research		3-5
Thesis Program		
Thesis (610)		3
Seminar or Supporting Electives		0-2
Non-Thesis Program		
Research Report (600)		
Seminar or Supporting Electives		0-2

*All graduate students beginning work for the first time may waive this requirement with permission of the department chairman.

**Required of all students in elementary education admitted to graduate school after September 1, 1967.

***Candidates for the Master's degree in elementary education with a major in elementary education must meet the requirements for a Provisional Certificate in Pennsylvania, or its equivalent, before being admitted to degree candidacy.

****Students who had a recent basic course in child development may, by permission of the Department, substitute EdP 553, Child Development and Behavior II.

ELECTIVES

			Semester Credits
Group 1.		Electives offered by the Elementary Education Department.	
EdE	505	The Teacher in the Elementary School	2
EdE	510	Foundations of Reading Instruction	3
EdE	514	Reading in the Content Areas	2
EdE	516	Analysis, Diagnosis and Correction of Reading Difficulties	2
EdE	522	Teaching the Communication Skills	2
EdE	525	Curriculum and Research in Language Arts	2
EdE	530	Social Studies in Elementary Education	2
EdE	532	Social Studies Curriculum and Instruction	2
EdE	541	Unit Teaching in the Elementary School	2
EdE	543	Creative Expression in the Elementary School	2
EdE	545	The Kindergarten Primary School Program	2
EdE	547	Elementary School Curriculum	2
EdP	551	Child Development and Behavior I	3
EdP	553	Child Development and Behavior II	3
EdE	560	Meeting Individual Needs of Children	2
EdC	561	Guidance in the Elementary School	3
EdE	563	Evaluation in the Elementary School	2
EdE	565	Effective Classroom Management	2
EdE	570	Supervision in the Elementary Classroom	2
Group 2.		Electives offered by other departments.*	
Art	500	Art Activities in the Elementary School	2
Bio	523	Resource Materials in Elementary Science	3
Sci	595	Elementary Science and Instruction	3
Bio	596	Independent Study in Elementary Biological Science	3
EdM	527	Audio Visual Materials in the Elementary School	2
EdM	530	Orientation to Educational Media	3
Eng	544	Problems of Speech Correction	2
HEd	502	Elementary Physical Education Workshop	2
HEd	541	School-Community Health Education Workshop	3
Lan	502	FLES	2
Lit	550	Literature for the Elementary School	2
Mat	501	Fundamental Concepts of Mathematics I	3
Mat	530	Geometry for Elementary Grades	3
Mat	502	Fundamental Concepts of Mathematics II	3
Mat	555	Modern Techniques of Teaching Elementary School Mathematics	2
Mat	556	The Development of the Mathematics Curriculum in the Elementary Grades	2
Mus	572	Vitalizing Music in the Elementary Grades	2
Mus	573	Keyboard Activities for the Elementary Teacher	2
Mus	574	Teaching of Music Appreciation in the Elementary Grades	2

* Electives may also be chosen from the course offerings of any department, provided the student has the approval of the department involved and of the Elementary Education Department.

Comprehensive Examination in Elementary Education

Saturday, February 10, 1968	(Application due December 1, 1967)
Saturday, July 13, 1968	(Application due May 1, 1968)
Saturday, February 8, 1969	(Application due December 1, 1968)
Saturday, July 12, 1969	(Application due May 1, 1969)

INTERNSHIP PROGRAM FOR CERTIFICATION

A program provided for individuals who have already earned a Bachelor's degree in Arts and Sciences but who are not certified to teach. The program will afford a person an opportunity to take sufficient course work to enable him to enter a classroom as an intern teacher. It will also permit him to continue his post-baccalaureate study concurrently and in summer sessions until he earns the college provisional certificate and the Master of Education degree.

HOW TO ENTER THE PROGRAM

1. The individual must have earned a baccalaureate degree from a state and regionally approved college or university. Those entering from a non-accredited college must complete a recommended minimum of 30 semester hours as designated by the major department.
2. The individual must be admitted to the college through the regularly outlined program for admission.
3. The individual must have an undergraduate quality point average of 2.5 or better to enter the graduate degree program.
4. The individual's major must be in an area of study closely allied to the field of study in which the intern teacher will be assigned. (e.g. A major in Social Science is required for the student who wishes to teach in the field of History.)
5. Employment will be arranged by the applicant in a public school in the student teaching service area approved by the college, and the applicant will teach in a field for which West Chester State College has an approved program for certification.

TOTAL CREDITS NEEDED FOR PERMANENT CERTIFICATES

MAJOR ACADEMIC FIELDS:	s.h.
English	42
Geography	30
Language	30
Mathematics	36
Science:	
Biology	36
Chemistry	40
Comprehensive Science	44
Earth Science	44
Physics	40
Social Science:	
Comprehensive Social Studies	48
History	48

ELEMENTARY INTERNSHIP PROGRAM
REQUIREMENTS LEADING TO THE
MASTER OF EDUCATION DEGREE AND/OR CERTIFICATION

To qualify a student must have a quality point average of 2.5 (A=4.0)

			Semester Credits
Required Undergraduate Work			
EdP	250	Psych. of Learn. & Develop.	3
EdE	309	Language Arts	6
EdE	412	Student Internship	12
		Sub Total A	21
Required Graduate Work			
I. General Educ. Requirements			
Hum	500	Humanities	2
Res	500	Meth. & Mat. Research	2
EdF	510	Educational Foundations	3
		Sub Total B	7
II. Specialized Preparation			
EdE	510	Found. of Reading	3
EdE	514	Read. in Content Areas	2
EdE	522	Tch. Communication Skills	2
EdE	505	The Teacher in the Elementary School	2
EdP	550	Adv. Educ. Psychology	3
EdP	551	Child Development and Behavior I	3
		Sub Total C	15
III. Electives			
(12 credits from a minimum of 4 areas selected through faculty advisement)			
		Sub Total D	12
TOTAL (minimum of 55 s.h.)			55

SECONDARY INTERNSHIP PROGRAM
REQUIREMENTS LEADING TO THE
MASTER OF EDUCATION DEGREE AND/OR CERTIFICATION

To qualify a student must have a quality point average of 2.5 (A=4.0)

REQUIREMENTS FOR MASTER'S DEGREE

Incorporating Certification to Teach

EdP	250	Psych. Learning and Development	3
EdS	412	Stu. Internship	12
EdF	510	Educational Foundations	3
EdS	502	Secondary School Curr.	2
Res	500	Meth. & Mat. of Research	2
		Meth. & Cont. Acad. Subp.	2
			24

* Students who have had a recent basic course in Child Development may, by permission of the Elementary Education Department shall substitute EdP 533, Child Development and Behavior II.

Sub Total A
(Courses under 500 — Undergraduate)
(Courses over 500 — Graduate)

			Semester Credits
Elect Minimum of 7 s.h. from the Following:			
EdS	502	Secondary School Curr.	2
EdP	550	Adv. Educational Psych.	3
EdC	540	Evaluative Methods	2
EdF	580	Hist. & Philos. of Educ.	3
EdS	506	The Junior High School	2
EdM	530	Orientation to Educational Media	3
EdC	552	Seminar in Human Develop. (Adolescent & Adult)	3
			7

Sub Total B
Academic Major: Minimum 18 s.h.

HOW THE PROGRAM OPERATES

Upon being admitted to the college, the candidate will be required to take a core of basic courses which will be determined after a careful evaluation of the student's transcript of undergraduate work. This course work must be taken during a summer session or during one of the semesters of the regular school year prior to entering an assignment as an intern in an approved school in the service area surrounding West Chester State College.

Supervision of the intern will be cared for by regularly assigned supervisors on the college faculty. A minimum of one semester's internship under college supervision is required.

*GUIDANCE & COUNSELING

	Thesis 30 Cr. Program Sem. Hrs. Cr.	*Non-Thesis 34 Cr. Program Sem. Hrs. Cr.*
I. GENERAL COURSES		
Required	6	6
II. *PROFESSIONAL BACKGROUND		
Required	14	14
Elective	2	2-5
III. *ADVANCED PROFESSIONAL AREA		
Required	6	4
Elective	2	5-8

Holders of the bachelor's degree should have a total of 15 semester hours credit of undergraduate study in 1) psychology, 2) the 15 credits may include not more than two courses in sociology, 3) or a substantial equivalent as determined by the program advisor. Holders of degrees other than majors in education or psychology require determination of background requirements by the program advisor.

1) For secondary counseling majors the above must include a course in adolescent psychology
2) For elementary counseling majors the above must include a course in child psychology.
3) To compensate for any of these deficiencies, courses should be taken prior to evaluation for degree candidacy and may not be included in the total of 34 required graduate credits (or in the 30 credits for thesis candidates.)

* Application for degree candidacy must be made by June 1, 1968 for those students who have registered to take Guidance courses prior to June 1, 1966. These applications are obtained from and filed with the Graduate Office when requirements for *Degree Candidacy* are *completed.* Appropriate credits beyond 15 refer only to required and elective courses listed in the curriculum outline.

		Semester Credits
A. 1.	EdF 510 Educational Foundations	3
2.	Res 500 Methods & Materials of Research (for Psychology and Guid. majors)	2
3.	Psy 500 Introductory Statistics for the Behavioral Sciences	2
	Required Minimum Total	7

B. An approved primary research paper in guidance on File. (If in doubt please consult Dr. Hill)

C. The results (already on file) of the G.R. E., in two parts. (The advanced Test may be taken in Psychology, Sociology or Education)

D. Undergraduate deficiencies removed.

(See also Graduate Bulletin, section on Admission Requirements and Examinations.) Total course credits must not exceed 15 from Group I, and required, only, from Group II.

MASTER'S PROGRAM IN GUIDANCE AND COUNSELING FOR ELEMENTARY SCHOOL COUNSELORS AND SECONDARY SCHOOL COUNSELORS

	Semester Credits
I. FOUNDATIONS OF EDUCATION AND RESEARCH	
Required General Courses — 7 credits	
EdF 510 Educational Foundations	3
Res 500 Methods and Materials of Research (Guidance)	2
Psy 500 Introductory Statistics for the Behavioral Sciences	2
II. PROFESSIONAL BACKGROUND AREA	
Note: One of the following is required only where the matriculant lacks a course in "child psychology"	
EdP 551 Child Development or Behavior I	3
OR	
EdC 552 Seminar in Human Development (Adolescent and Adult)	3
The following are required — 14 credits	
EdC 500 Principles and Techniques of Guidance	2
EdC 570 Principles and Techniques in Counseling	2
EdC 562 Organization and Administration of the School Guidance Program	2
EdC 540 Evaluative Methods in Guidance	3
Required of elementary school counselor candidates:	
EdP 553 Child Development and Behavior II	3
EdC 561 Guilance in the Elementary School	3
Required of secondary counselor candidates:	
Psy 554 Seminar: Adolescent Case Studies	3
EdC 556 Occupational, Educational and Social Information in Guidance	2

Electives

			Semester Credits
May be taken with approval of the advisor: 3 or 9 credits			
Psy	501	Advanced Statistics for the Behavioral Sciences	2
Soc	531	Social Pathology	3
EdC	567	Group Guidance	2
EdC	573	Advanced Course in Techniques of Counseling	2

III. ADVANCED PROFESSIONAL AREA

Required: 4 or 6 credits as indicated below

Thesis Program

EdC	590	Practicum in Guidance and Counseling	3
		Thesis	3

Non-Thesis Program

EdC	590	Practicum in Guidance and Counseling	3
		Research Report	1

ELECTIVES

These courses are offered to matriculants in the guidance and counseling program as well as to other matriculants with joint approval of their advisor and the program coordinator of the guidance program.

EdA	570	Psychology of the Mentally Atypical Child	2
Psy	562	Psychology of Personality	2
Psy	563	Mental Hygiene	2
Psy	580	Indiv. Psychometric Techniques: Wechsler and Binet Scales	4
Res	591	Research Seminar	1-2
EdE	547	Elementary School Curriculum	2
EdS	502	Secondary School Curriculum	2
Hum	500	Humanities	2

Note: Electives not recommended outside of the field. See Departmental Advisor.

ENGLISH

The candidate for the Master's Degree with a major in English must meet the general requirements as shown in the outline below, and he must meet the specific departmental course requirements as stated below the outline.

			Semester Credits
I. Required Courses			7-9
Hum	500	Humanities*	2
EdF	510	Educational Foundations	3
Res	500	Methods and Materials of Research	2
Eng	501	Modern Techniques for the Teaching of English	2

THESIS PROGRAM (30 s.c.)

II. Area of Concentration 16-20

A. Required Courses in Major Field
B. Electives under Advisement

* All graduate students beginning graduate work for the first time may waive this requirement with permission of the department chairman.

	Semester Credits
III. Research	3-5
Thesis (610)	3
Seminar	0-2

NON-THESIS PROGRAM (34 s.c.)

II. Area of Concentration	23-27
III. Research	0-2
Research Report (600)	0-2
Seminar or Supporting Electives	0-2

Below are listed five groups of courses under A, B, C, D, and E. Every English major must have a minimum of two courses from A, B, and C and at least one course from groups D and E. If he writes a thesis he must have a minimum, therefore, of eight courses from the five groups; if he does not write a thesis, thereby electing the 34-hour option, he must have a minimum of eleven courses from the five groups. In addition, he must be prepared to take any courses deemed necessary by his adviser.

The written comprehensive examination (refer to section on Examinations), which is offered the second Wednesday of December, April, and July, includes both British and American literature. It must be passed with some distinction. If a student fails this examination twice, he must petition the English Department for the opportunity of attempting it a third and final time.

			Semester Credits
Group A			
Eng	502	History of the English Language	2
Eng	503	Old English Language and Literature	2
Eng	504	Linguistics for the Elementary School	2
Eng	505	Linguistics for the Secondary School	2
Group B			
Lit	511	English Literary Criticism	2
Lit	512	American Literary Criticism	2
Lit	514	American Literary Movements	2
Lit	515	Comparative Literature: Romantic	2
Lit	517	Literary Spokesman for American Ideas	2
Lit	525	Biography	2
Group C			
Lit	521	English Literature to Chaucer	2
Lit	522	Chaucer	2
Lit	523	Eighteenth Century Novel	2
Lit	524	British and Continental Short Story	2
Lit	526	Tudor Poetry and Prose	2
Lit	527	Stuart Literature to the Commonwealth	2
Lit	528	Milton	2
Lit	529	Victorian Prose	2
Lit	530	Victorian Poetry	2
Lit	533	Romantic Prose and Poetry	2
Lit	539	Eighteenth Century Poetry and Prose	2
Lit	542	Spenser	2
Group D			
Lit	516	Major Twentieth Century American Poets	2
Lit	534	Twain and James	2
Lit	535	Twentieth Century American Writers	2
Lit	537	Emerson and Thoreau	2
Lit	538	Hawthorne and Melville	2

			Semester Credits
Group E			
Lit	531	Shakespeare's Predecessors in Drama	2
Lit	532	Advanced Shakespeare	2
Lit	536	Twentieth Century Drama	2
Lit	540	Restoration and Eighteenth Century Drama	2

ENGLISH SERVICE COURSES

The following courses are offered as a service to teachers. Open to anyone, they may be offered as part of the English program under certain conditions.

Lit	541	Greek and Roman Literature in Translation	2
Lit	550	Literature for the Elementary School	2
Lit	551	Literature for the Secondary School	2
Eng	590	Seminar in English	2
Sph	543	Advanced Problems in Public Speaking	2
Sph	544	Problems in Speech Correction	2
ThA	536	Television: Equipment, Planning, and Production I	3
ThA	537	Television: Equipment, Planning, and Production II	3
ThA	538	Television: Production of Graphic Arts	3

FOREIGN LANGUAGES

The candidate for the Master's Degree with a major in French, Spanish, German, or Latin must meet the general requirements as shown in the outline below, and he must meet the specific departmental course requirements as stated below the outline.

			Semester Credits
I. Required Courses			7-9
Hum	500	Humanities*	2
EdF	510	Educational Foundations	3
Lan	500	Methods and Materials of Research	2
Lan	503	Techniques of Language Teaching	2

THESIS PROGRAM (30 s.c.)

II. Area of Concentration	16-20
A. Required Courses in Major Field	
B. Electives under Advisement	
III. Research	3-5
Thesis (610)	3
Seminar	0-2

NON-THESIS PROGRAM (34 s.c.)

II. Area of Concentration	23-27
III. Research	0-2
Research Report (600)	0-2
Seminar	0-2

* All graduate students beginning graduate work for the first time may waive this requirement with permission of the department chairman.

Below are listed five groups of courses. Group I includes courses common to all majors in French, Spanish, German, or Latin. Every major student must have a minimum of two courses from Group I, and he must have a minimum of six courses from those in Group II, III, IV, or V listed under his respective language. All foreign language courses are for three semester credits, except those listed under Group I, which are for two semester credits.

			Semester Credits
Group I (Professional Education)			
Lan	500	Methods and Materials of Research	2
Lan	501	Linguistics	2
Lan	502	FLES	2
Lan	503	Techniques of Language Teaching	2
Lan	504	Language Laboratory Techniques	2
Group II			
Fre	511	Romance Philology	3
Fre	512	Explication de Texte	3
Fre	513	Phonetics	3
Fre	514	Advanced Grammar and Composition	3
Fre	520	Rabelais and Montaigne	3
Fre	522	Voltaire and Rousseau	3
Fre	523	Proust	3
Fre	524	Gide	3
Fre	530	French Classical Tragedy	3
Fre	531	The French Novel (to the end of the 19th Century)	3
Fre	532	The 20th Century French Novel	3
Fre	533	French Lyric Poetry	3
Fre	534	The Contemporary French Theater	3
Group III			
Ger	511	German Philology	3
Ger	512	German Civilization	3
Ger	513	Phonetics	3
Ger	514	Advanced Grammar and Composition	3
Ger	520	The Age of Goethe	3
Ger	521	Goethe	3
Ger	522	Schiller	3
Ger	530	German Reformation, Baroque, and Pseudo-Classicism	3
Ger	531	German Literature of the 19th Century	3
Ger	532	German Drama of the 19th and 20th Centuries	3
Ger	533	Middle High German Literature	3
Ger	540	The German Short Story	3
Ger	541	Modern German Poetry	3
Ger	542	Modern German Novel	3
Group IV			
Spa.	510	Advanced Spanish Phonetics	3
Spa	511	Advanced Spanish Grammar and Stylistics	3
Spa	512	Spanish Civilization	3

			Semester Credits
Spa	520	Cervantes	3
Spa	521	Lope de Vega	3
Spa	522	Calderon	3
Spa	530	Medieval Spanish Literature	3
Spa	531	Spanish Renaissance and Humanism	3
Spa	532	Nineteenth Century Spanish Literature	3
Spa	533	The Generation of 1898	3
Spa	540	The Picaresque Novel	3
Spa	541	The Modern Spanish Theatre	3
Spa	542	Lyric Poetry	3
Spa	550	The Spanish American Novel	3

Group V.

Lat	511	Comparative Grammar of Greek and Latin	3
Lat	512	History of the Latin Language	3
Lat	513	Italic Dialects	3
Lat	514	Advanced Latin Prose Composition and Translation	3
Lat	520	Advanced Course in the Works of Julius Caesar	3
Lat	521	Cicero's Philosophical Essays	3
Lat	525	Latin Metre and Verse	3
Lat	526	Greek and Latin Epic	3
Lat	527	Roman Historiography	3
Lat	528	Roman Satire	3
Lat	529	The Latin Novel	3
Lat	530	Medieval Latin Literature	3
Lat	531	Latin Epigraphy	3
Lat	532	Roman Archaeology	3
Lat	533	Historical Numismatics	3
Lat	534	Geography of Ancient Greece and Italy	3

SERVICE COURSES

PHILOSOPHY

Courses in Philosophy in the College of Arts and Sciences are open to all curricula by permission of the professor.

			Semester Credits
Phi	500	Methods and Materials of Research in Philosophy	2
Phi	510	Existentialism	3
Phi	511	Philosophic Concepts	3
Phi	512	Contemporary Ethical Problems	3
Phi	513	Philosophy of Art	3
Phi	514	Philosophy of Religion	3
Phi	520	Philosophy of Mind	3
Phi	521	Philosophy of the Social Sciences	3
Phi	522	Philosophy of Science	3
Phi	523	Philosophy of Language	3
Phi	530	American Philosophy	3
Phi	531	Oriental Philosophy	3
Phi	540	Plato Seminar	2
Phi	541	St. Thomas Aquinas Seminar	2
Phi	542	Kant Seminar	2
Phi	600	Thesis	6

GEOGRAPHY

The candidate for the Master's Degree with a major in geography must meet the general requirements as shown in the cutline below, and he must meet the specific departmental course requirements as stated below the outline.

			Semester Credits
I.	Required Courses		7-9
Hum	500	Humanities*	2
EdF	510	Educational Foundations	3
Res	500	Methods and Materials of Research	2
Geo	500	Modern Techniques of Teaching Geography	2

THESIS PROGRAM (30 s.c.)

II.	Area of Concentration	16-20
A.	**Required Course in Major Field	
Geo 584	Seminar in Geographical Research	2
B.	Electives (under advisement)	14-18
III.	Research	3-5
Thesis (610)		3
Seminar		0-2

NON-THESIS PROGRAM (34 s.c.)

II.	Area of Concentration	23-27
A.	**Required Course in Major Field	
Geo 584	Seminar in Geographical Research	2
B.	Electives (under advisement)	21-25
III.	Research	0-2
Research Report (600)		0-2
Seminar		0-2

Group I. EARTH STUDIES

Geo	501	Geomorphology	3
Geo	502	Regional Physiography of North America	3
Geo	503	General Climatology	3
Geo	504	Regional Climatology of the Continents	3
Geo	505	Advanced Cartography	3
Geo	506	Advanced Physical Geography	3
Geo	507	Advanced Map Interpretation	3

Group II. ECONOMIC AND POLITICAL STUDIES

Geo	520	Problems of Economic Geography	3
Geo	521	World Economic Patterns	3
Geo	522	Agricultural Geography	3

* All graduate students beginning graduate work for the first time may waive this requirement with permission of the department chairman.

**The candidate for the Master's Degree in geography must select a program of courses from the elective groups listed below. A minimum of two courses from groups I, II, III and the remaining courses necessary to fulfill the general requirements, must be chosen with the approval of the faculty adviser.

			Semester Credits
Geo	523	Advanced Conservation of Natural Resources	3-6
		Course I. Conservation of U. S. Resources	3
		Course II. Problems and Research in Resource Management	3
Geo	524	Geography of Population	2
Geo	525	Geography of Regional Planning	3
Geo	526	Urban Geography	3
Geo	527	Political and Global Concepts in Geography	3
Geo	529	Geographic Influences in World History	3

Group III. REGIONAL STUDIES

Geo	540	Geography of the United States	3
Geo	541	Geography of the United States in its World Relations	3
Geo	542	Geography of Canada	3
Geo	543	Geography of Mexico and Middle America	3
Geo	544	Geography of South America	3
Geo	545	Geography of Europe (Excluding the U.S.S.R.)	3
Geo	546	Geography of the Soviet Union	3
Geo	547	Geography of Asia (Excluding the U.S.S.R.)	3
Geo	549	Geography of Africa	3

Group IV. SPECIAL STUDIES IN GEOGRAPHY

Geo	580	Seminar in Geography in Education	2
Geo	581	Seminar in Modern Philosophy of Geography	2
Geo	582	Seminar in Geographical Writing and Literature	2
Geo	584	Seminar in Geographical Research	2
Geo	585	Geography Field Methods	3
Geo	586	Area Field Studies (Courses I, II and III)	3-9
Geo	587	Geography Workshop for Teachers	3
Geo	600	Research Report	1-2
Geo	610	Thesis	3

SERVICE COURSES IN GEOGRAPHY

Geo	501	Geomorphology	3
Geo	503	General Climatology	3
Geo	523	Advanced Conservation of Natural Resources Workshop	3
Geo	528	Concepts of Modern Global Geography	3
Geo	529	Geographic Influences in World History	3
Geo	540	Geography of the United States	3
Geo	541	Geography of the United States in its World Relations	3
Geo	543	Geography of Mexico and Middle America	3
Geo	544	Geography of South America	3
Geo	545	Geography of Europe (Excluding the U.S.S.R.)	3
Geo	587	Geography Workshop for Teachers	3

(Other courses by approval of the Geography Department)

HEALTH AND PHYSICAL EDUCATION

I.	Required Courses			5-7
A.	Hum	500	Humanities*	2
B.	PeD	500	Methods and Materials of Research (Health and Physical Education)	2
C.	EdF	510	Educational Foundations	3

* All graduate students beginning graduate wark for the first time may waive this requirement wtih permission af the department chairman.

THESIS PROGRAM (30 s.c.)

				Semester Credits
II.	Area of Concentration			18-20
	A. Required Courses			9
	PeD	530	Scientific Bases for Physical Education	3
	PeD	550	Historical and Philosophical Bases for Health, Physical Education, and Recreation	3
	PeD	561	Statistics in Health and Physical Education	3
	B. Electives chosen under advisement			9-11
III.	Research			5
	A. PeD	593	Thesis Seminar	2
	B. PeD	610	Thesis	3

NON-THESIS PROGRAM (34 s.c.)

II.	Area of Concentration			25-27
	A. Required Courses in Major field			18
	B. Electives chosen under advisement			7-9
	The student must include courses in the following:			
	PeD	530	Scientific Bases for Physical Education	3
	PeD	550	Historical and Philosophical Bases for Health, Physical Education and Recreation	3
	PeD	561	Statistics in Health and Physical Education	3
	PeD	562	Administrative and Supervisory Practices in Health, Physical Education, and Recreation	3
	PeD	570	Curriculum Development in Health and Physical Education	3
	PeD	521	Administration and Supervision of Inter-school and Intramural Athletics	3
			This course may be substituted for HEd 562	
III.	Research			2
	Research Report			2
	To be written in Non-Thesis Seminar A and B			
	A. PeD	591	Non-Thesis seminar (A) - (1)	
	B. PeD	592	Non-Thesis seminar (B) - (1)	

Electives

PeD	502	Elementary Physical Education Workshop	2
PeD	510	School and Community Recreation	3
PeD	512	Outdoor Education Workshop	2
PeD	520	Advanced Coaching	3
PeD	521	Administrative Supervision of Interschool and Intramural Athletics	3
PeD	530	Scientific bases for Physical Education	3
PeD	531	Adapted Physical Education	3
PeD	534	Modern Principles of Athletic Training	2
HEd	540	School Health Problems	3
HEd	541	School-Community Health Education Workshop	3
PeD	550	Historical and Philosophical Bases for Health and Physical Education	3
PeD	551	Seminar: Professional Literature in Health, Physical Education, and Recreation	3
PeD	560	Contemporary Problems in Health, Physical Education, and Recreation	3
PeD	561	Statistics in Health and Physical Education	3
PeD	562	Administration and Supervisory Practices in Health, Physical Education, and Recreation	3

			Semester Credits
PeD	563	Scientific Measurement and Instrumentation	2
PeD	564	The Biodynamics of Human Performance	3
PeD	570	Curriculum Development in Health and Physical Education	3
PeD	571	Comparative Physical Education Contemporary Foreign Programs	3
PeD	572	The Child and Physical Education	3
PeD	580	Contemporary Practices in Safety Education	2
PeD	590	Methods and Materials of Research	2
PeD	591	Non-Thesis Seminar A	1
PeD	592	Non-Thesis Seminar B	1
PeD	593	Thesis Seminar	2
PeD	610	Thesis	3

SERVICE COURSES

HEALTH AND PHYSICAL EDUCATION

			Semester Credits
PeD	502	Elementary Physical Education Workshop	2
HEd	503	Advanced Aquatics	2
HEd	510	School and Community Recreation	2
HEd	512	Outdoor Education Workshop	2
HEd	520	Advanced Coaching	3
HEd	540	School Health Problems	3
HEd	541	Community-School Health Education Workshop	3

MATHEMATICS

The candidate for admission to the graduate program in mathematics must present an undergraduate background including at least 24 semester credits in mathematics. This must include a full treatment of calculus and at least one post calculus course in the area of algebra, geometry, or analysis.

The candidate for the Master's Degree with a major in mathematics must meet the general requirements as shown in the outline below, and he must meet the specific department course requirements as stated below the outline.

			Semester Credits
I.	Required Courses		9
Hum	500	Humanities*	2
EdF	510	Educational Foundations	3
Mat	500	Methods and Materials of Research in Mathematics Education	2
Mat	550	Modern Techniques of Teaching Secondary School Mathematics	2
		OR	
Mat	551	Teaching Secondary School Mathematics to the Low Achiever	2

THESIS PROGRAM (30 s.c.)

		Semester Credits
II.	Area of Concentration	16-18

A. Required courses in Major Field — Must include courses in each of the major areas of algebra, geometry or topology, analysis, and statistics.

B. Electives chosen under advisement.

* All graduate students beginning graduate work for the first time may waive this requirement with permission of the department chairman.

		Semester Credits
III.	Research	3-5
	A. Mat 610 Thesis	3
	B. Seminar or Supporting Electives	0-2

NON-THESIS PROGRAM (34 s.c.)

II.	Area of Concentration	23-25
	A. Required Courses in Major Field — Must include courses in each of the major areas of algebra, geometry or topology, analysis, and statistics.	
	B. Electives chosen under advisement.	
III.	Research	0-2
	A. Mat 600 Research Report	0-2
	B. Seminar or Supporting Electives	0-2

The candidate for a Master's Degree with a major in mathematics must select his Area of Specialization program from the courses listed below. This program must meet the approval of the faculty advisor.

Mat	503	History of Mathematics	3
Mat	505	Theory of Sets	3
Mat	512	Modern Algebra	3
Mat	513	Linear Algebra	3
Mat	514	Theory of Numbers	3
Mat	523	Mathematical Statistics I	3
Mat	524	Mathematical Statistics II	3
Mat	532	Modern Geometry	3
Mat	533	Projective Geometry	3
Mat	535	Topology	3
Mat	541	Advanced Calculus I	3
Mat	542	Advanced Calculus II	3
Mat	543	Differential Equations	3
Mat	545	Real Variable	3
Mat	547	Complex Variable	3
Mat	550	Modern Techniques of Teaching Secondary School Mathematics	2
Mat	551	Teaching Secondary School Mathematics to the Low Achiever	2
CSc	501	Introduction to Computer Programming	3

MUSIC EDUCATION

The candidate for the Master's Degree with a major in music education must meet the general course requirements as stated below. In addition, he must meet whatever requirements the School of Music may feel necessary in his particular situation.

				Semester Credits
I.	Required Courses			5-7
	A.	Hum 500	Humanities*	2
	B.	Mus 500	Methods and Materials of Research	2
	C.	EdF 510	Educational Foundations	3

* All graduate students may now waive this requirement with permission of the dean of the School of music.

THESIS PROGRAM (30 s.c.)

	Semester Credits
II. Area of Concentration	18-22
A. Required Courses:	12
Mus 510 Current Trends in Music Education	2
Section I Music Education (Select One)	2
Section II Applied Music	4
Section III and/or IV	4
B. Elective chosen under advisement Section I-V	8-10
III. Research	3-5
A. Thesis (Mus 610)	3
B. Seminar or Supporting Electives	0-2

NON-THESIS PROGRAM (34 s.c.)

II. Area of Concentration	25-28
A. Required Courses As in THESIS PROGRAM	12
B. Electives chosen under advisement Sections I-V	13-16
III. Research	1-2
Mus 588-589	0-2
Mus 600 Research Report	1-2

Elective Courses for Music Students

Section I. MUSIC EDUCATION

Mus	511	Administration of Public School Music	2
Mus	512	Music Education in the Secondary School	2
Mus	513	Music Education in the Elementary School	2
Mus	514	Pedagogy of Music Theory	2
Mus	515	Marching Band Techniques and Materials	2
Mus	516	Piano Pedagogy	2
Mus	518	Vocal Pedagogy	2
Mus	519	Music Appreciation in the General Music Program	2
Mus	584	Seminar in Piano Teaching and Teaching materials	2
Mus	585	String Literature and Pedagogy	2

Section II. APPLIED MUSIC

KEYBOARD:

Mus	541-545	Advanced Piano or Organ	1 or 2
Mus	546-9	Piano Ensemble and Master Class	1-2
Mus	581	Accompanying	2

VOCAL:

Mus	503	Advanced Choral Conducting	2
Mus	531-535	Advanced Voice	1 or 2
Mus	536-539	Vocal Ensemble and/or Chorus	1
Mus	576-577	Opera Workshop	2
Mus	586-7	Vocal Diction	2

Semester Credits

INSTRUMENTAL

Mus	501-502	Advanced Class Instructions in Instruments	1
Mus	504	Advanced Instrumental Conducting	2
Mus	561-565	Advanced Instruments	1 or 2
Mus	566-569	Ensemble and/or Orchestra or Band	1

Section III. STRUCTURE AND ORGANIZATION OF MUSIC

Mus	521	Advanced Counterpoint	2
Mus	522	Advanced Composition and/or Orchestration	2
Mus	523	Advanced Band Arranging	2
Mus	528	Twentieth Century Musical Styles	2
Mus	582	Advanced Musical Form	2

Section IV. LITERATURE AND HISTORY OF MUSIC

Mus	505	Contemporary Music	2
Mus	506	Instrumental Literature	2
Mus	507	Vocal Literature	2
Mus	508	Choral Literature	2
Mus	509	Piano Literature	2
Mus	525	Woodwind Literature	2
Mus	526	Brass Literature	2
Mus	527	History of the Opera	2
Mus	583	Music in the Baroque Period	2
Mus	591	Music in the Romantic Era	2

Elective Courses for All Students

Section V.

Mus	520	Instrument (Individual Lessons)	1
Mus	530	Voice (Individual Lessons)	1
Mus	540	Piano (Individual Lessons)	1
Mus	550	Organ (Individual Lessons)	1
Mus	560	Study and Appreciation of the Opera	2
Mus	571	Music Criticism and Aesthetics	2
Mus	590	Study and Appreciation of the Symphony	2

Elective Courses for Elementary Education Students

Mus	572	Vitalizing Music in the Elementary School	2
Mus	573	Keyboard Activities for the Classroom Teacher	2
Mus	574	Teaching of Music Appreciation in the Elementary Grades	2

PHYSICAL SCIENCE

NON-THESIS PROGRAM ONLY (34 s.c.)

Semester Credits

I. Required Courses — 7-9

Hum	500	Humanities*	2
EdF	510	Educational Foundations	3
Res	500	Methods and Materials of Research	2

Elective

PSc	502	Modern Techniques in Physical Science Teaching	2

* All Graduate Students beginning graduate work for the first time may waive this requirement with permission of the departmental chairman.

				Semester Credits
II.	Area of Concentration			23-27
	A.	Distributed Electives in Physical Science		9
		One course must be taken from each of the three groups unless the candidate is exempt from one or more by virtue of his previous preparation and experience.		
	Group I	CHEMISTRY		
	Che	502	Modern Trends in Chemistry Teaching	3
	Che	520	Advanced Analytical Chemistry	3
	Che	541	Selected Topics in Physical Chemistry	3
	Group II	EARTH AND SPACE SCIENCE		
	PSc	501	Historical Geology	3
	PSc	503	Principles of Physical Geology	3
	PSc	520	Earth Science for Secondary School Teachers	3
	PSc	521	Minerology for the Science Teacher	3
	PSc	532	Space Science	3
	PSc	560	Workshop in Rocks and Minerals	3
	PSc	562	General Geological Field Studies of Southeastern Pennsylvania	3
	Group III	PHYSICS		
	PSc	510	Electronics for Teachers	3
	PSc	511	Electricity for Teachers	3
	PSc	512	Mechanics for Teachers	3
	PSc	513	Modern Physics for Teachers	3
	PSc	524	Experimental Physics	1-3
	Other Electives—Open to students with the appropriate prerequisites.			
	PSc	507	Recent Advances in Physical Science	3
	PSc	508	Nuclear Physics for Teachers	3
	Any Chemistry or Physics course may be elected under advisement.			
	B.	Electives under advisement		14-18
III.	Research			0-2
	A. PSc	506	Seminar in Physical Science	0-2

PHYSICS

I.	Required Courses			7-9
	Hum	500	Humanities*	2
	EdF	510	Educational Foundations	3
	Res	500	Methods and Materials of Research	2
	Phy	505	Modern Trends in Physics Teaching	2

THESIS PROGRAM (30 s.c.)

II.	Area of Concentration			16-20
	A.	Required Courses in Major Field		12
	Phy	501	Introduction to Theoretical Physics	3
	Phy	506	Analytical Mechanics	3
	Phy	513	Electromagnetic Theory I	3
	Phy	531	Modern Physics	3

* All Graduate Students beginning graduate work for the first time may waive this requirement with permission of the department chairman.

				Semester Credits
B.	Elective Courses (Under advisement)			4-8
	Phy	532	Electromagnetic Theory II	3
	Phy	533	Statistical Mechanics	3
	Phy	541	Quantum Mechanics I	3
	Phy	542	Quantum Mechanics II	3
	Phy	551	Mathematical Physics	3
	Phy	591	Seminar	1
	Che	541	Special Topics in Physical Chemistry	3
	PSc	590	History of the Physical Sciences	3
III.	Research			3-5
A.	Phy	591	Seminar	0-2
B.	Phy	581	Thesis	3

NON-THESIS PROGRAM (34 s.c.)

II.	Area of Concentration			23-27
A.	Required Courses in Major Field			15
	Phy	501	Introduction to Theoretical Physics	3
	Phy	506	Analytical Mechanics	3
	Phy	513	Electromagnetic Theory I	3
	Phy	531	Modern Physics	3
	Phy	533	Statistical Mechanics	3
B.	Elective Courses			8-12
	Phy	532	Electromagnetic Theory II	3
	Phy	541	Quantun Mechanics I	3
	Phy	542	Quantum Mechanics II	3
	Phy	551	Mathematical Physics	3
	Phy	591	Seminar	1
	Che	541	Special Topics in Physical Chemistry	3
	PSc	590	History of the Physical Sciences	3
III.	Research			0-2
A.	Phy	591	Seminar	0-2
B.	Research Report (no credit assigned) (600)			0

SOCIAL SCIENCE

The candidate for the Master's Degree with a major in social science must meet the requirements stated below.

				Semester Credits
I.	Required Courses			7
	Hum	500	Humanities*	2
	Ssc	500	Methods and Materials of Research in the Social Sciences	2
	EdF	510	Educational Foundations	3

THESIS PROGRAM (30 s.c.)

II.	Area of Concentration		18-20
A.	Required Courses		
	Group I: American History		6
	Group II: European History		6
	Group III: Social Sciences		
	A. Anthropology and Sociology		2
	B. Economics		2

* All Graduate Students beginning graduate work for the first time may waive this requirement with permission of the department chairman.

Semester Credits

C. Political Science 2
B. Electives as advised 0-2

III. Research 3-5
Thesis (610) 3
Seminar or Supporting Electives as advised 0-2

NON-THESIS PROGRAM (34 s.c.)

II. Area of Concentration 25-27
A. Required Courses
Group I: American History 6
Group II: European History 6
Group III: Social Sciences
A. Anthropology and Sociology 2
B. Economics 2
C. Political Science 2
B. Electives as advised 7-9

III. Research 0-2
Research Report (600) 0-2
Seminar or Supporting Electives as advised 0-2

Group I: American History
Course Offerings:

His	510	Colonial and Revolutionary America: 1607-1783	2
His	511	Rise of the New Nation: 1783-1850	2
His	512	Civil War and Reconstruction: 1850-1876	2
His	513	Emergence of Modern America: 1876-1919	2
His	514	United States as a World Power: 1919-present	2
His	515	Problems in American Constitutional Development	3
His	516	Recent American Diplomatic History	2
His	550A	Seminar in American History	2

Group II: European History

His	530	Problems in Medieval Civilization	3
His	531	The Renaissance	2
His	532	The Protestant Revolution	2
His	533	Dynastic Europe: 1648-1789	2
His	534	The French Revolution and Napoleonic Era: 1789-1815	2
His	535	Nationalism and Democracy: 1815-1914	2
His	536	Europe Since 1914	2
His	540	The Evolution of Modern Russia	3
His	541	Tudor and Stuart England	2
His	550B	Seminar in European History	2

Group III: Social Sciences

A. Anthropology and Sociology

Ant	530	Problems in Anthropology	3
Ant	550	Seminar in Anthropology	2
Soc	531	Social Pathology	3
Soc	532	Historical Sociology	3
Soc	533	Intergroup Relations	3
Soc	550	Seminar in Sociology	2

B. Economics

Eco	530	Economics and Public Policy	3
Eco	531	Comparative Economic Systems	3
Eco	532	History of Economic Thought	3
Eco	550	Seminar in Economics	2

			Semester Credits
C. Political Science			
Psc	531	Modern Political Theory	3
Psc	532	International Relations	3
Psc	533	The American Legislative Process	3
Psc	540	Democracy and Totalitarianism	3
Psc	550	Seminar in Political Science	2
Group IV: Special Studies			
Eco	533	Teaching Economics in Secondary Schools	2
His	523	Contemporary World Affairs	2
His	524	Studies in the History and Culture of South Asia	3
His	525	Studies in the History and Culture of East Asia	3
His	526	Workshop in World Cultures	2
His	527	Studies in the History and Culture of Emerging Africa	3
Ssc	500	Methods and Materials of Research in the Social Sciences	2
Ssc	502	Methods and Materials for Teaching Social Studies	2
Ssc	550	Seminar in Contemporary European Culture (Student European Tour)	6
Ssc	600	Research Report	2
Ssc	610	Thesis	3

SERVICE COURSES IN SOCIAL SCIENCE

Ssc	550	Seminar in Contemporary European Culture (Student European Tour)	6
His	526	Workshop in World Cultures	2
Ant	530	Problems in Anthropology	3
Eco	530	Economics and Public Policy	3
Psc	533	The American Legislative Process	3
Soc	531	Social Pathology	3

FOR STUDENTS WHO HAVE HAD His 211:

His	510	Colonial and Revolutionary America: 1607-1783	2
His	511	Rise of the New Nation: 1783-1850	2
His	512	Civil War and Reconstruction: 1850-1876	2

FOR STUDENTS WHO HAVE HAD His 212:

His	513	Emergence of Modern America: 1876-1919	2
His	514	United States as a World Power: 1919-present	2
His	516	Recent American Diplomatic History	2

FOR STUDENTS WHO HAVE HAD His 101-102:

His	523	Contemporary World Affairs	2
His	530	Problems in Medieval Civilization	3
His	531	The Renaissance	2
His	532	The Protestant Revolution	2
His	533	Dynastic Europe: 1648-1789	2
His	534	The French Revolution and Napoleonic Era: 1789-1815	2
His	535	Nationalism and Democracy: 1815-1914	2
His	536	Europe Since 1914	2
His	540	The Evolution of Modern Russia	3
His	541	Tudor and Stuart England	2

(Other courses by approval of the Department of Social Sciences)

IV. GENERAL INFORMATION

CLASS ATTENDANCE

Applicants for graduate courses should realize at the outset the importance of attending all classes. The student is held fully responsible for all work required for courses taken. Absences from class, therefore, do not constitute a valid reason for exemption from course responsibilities. Students absent from examinations for valid reasons should confer with the professor concerned as early as possible in order to make up the examination.

ADVISORY SYSTEM

The applicant for admission to graduate studies should think of the chairman of his department as his major advisor until such time as an advisor or an advisory committee is assigned to him. As soon as the applicant has declared his plans to the chairman of his major department, he will be assigned as the advisee of a professor in his major field. The student, aided by the advisor, will prepare a Program of Studies which outlines in detail the program he must complete in order to be eligible for the Master's Degree. Changes in the Program of Studies must be approved by the student's advisor. The initiative for seeking advisement and fulfilling degree requirements rests with the student.

CHANGING OF MAJOR CURRICULUM

The procedure for changing from one graduate program to another at West Chester State College is as follows:

1. A letter of request must be made to the Dean of Graduate Studies.
2. A letter of release must be obtained from the chairman of the department from which the student wishes to withdraw. This letter and the student's academic folder must be returned by the chairman to the Graduate Office.
3. A letter from the chairman of the department in which the student is enrolling must be submitted to the Graduate Office by that chairman.

CLASS HOURS

All classes for the graduate program are scheduled during the late afternoon, evening, Saturdays, and summer sessions. As enrollment warrants, the number of classes given during the regular academic year is adjusted accordingly. Most graduate courses, however, are given primarily during the summer sessions.

DISMISSAL FROM COLLEGE

In case of dismissal from the Graduate Studies Program, the College reserves the right to refuse to give the reason for such dismissal in writing.

CREDIT BY TRANSFER

West Chester State College will admit students from other accredited graduate schools to its graduate program provided they show evidence of good academic standing and can satisfy the college's admission requirements. Students who are admitted to the graduate program at West Chester State College and wish to take graduate work elsewhere for transfer credit must receive prior approval in order to assure that the transfer credit can be granted. In both of these cases, all transfer credits are subject to the following conditions:

1. The courses involved must be essentially the same as those offered at this institution.
2. The course grade must be at least B.
3. A maximum of six semester hours of graduate credit earned at another accredited institution will be accepted.

4. The credits must fall within the stipulated six-year time limit. All transfer credits accepted will be recorded on the student's record card during the student's last semester of graduate work at West Chester to assure that the transfer work does not fall outside the six-year limit.

It is not the policy to give graduate credit courses taken on an extension of off-campus center. (See Residence Requirements)

For students enrolled at other graduate schools, a letter of approval to take graduate work at West Chester should accompany the application to insure that the transfer is accepted by the institution granting the degree.

CULTURAL OPPORTUNITIES

The graduate student should avail himself of the cultural opportunities on campus and in the immediate vicinity. The college sponsors All Star Programs, lectures, entertainment, and other significant cultural activities. The immediate vicinity is rich in historical significance and cultural advantages. Also, the student will find easy access to Philadelphia and its museums, libraries, and similar facilities.

EXAMINATIONS

As noted in the requirements for admission, examinations vary according to the classification of the student; e.g., degree candidates must pass specific comprehensive examinations. Every graduate student must accept responsibility for knowledge of the examinations required of him by consulting with his advisor, major field professor, or the Dean of Graduate Studies.

All students working for a degree are required to take two examinations:

The Admission to Degree Candidacy Examination.

The Area of Specialization Examination (oral and/ written).

In addition, however, some students will be required to take a general background examination.

An explanation of the examinations and the conditions under which they will be required follows:

1. *The Admission to Degree Candidacy Examination* — The Admission to Degree Candidacy Examination is administered by the Graduate Office and evaluated by the student's major department. This examination must be taken some time between the acquisition of six and fifteen semester credits. The examination is broad and comprehensive in nature involving the *Graduate Record Examination* made by the Educational Testing Service. This test has two major parts. The first part includes a broad general background examination; and secondly, the last part includes a test in the student's major field of concentration. (Music majors will consult with their department chairman concerning this second requirement.)

By action of the Graduate Council effective since June 1, 1963, all graduate students who file an application for Degree Candidacy at West Chester must take the Graduate Record Examinations. All tests must be taken after the student has taken six graduate credits and before he has accumulated sixteen credits. The student who applies for Degree Candidacy after he has accumulated fifteen credits will lose all credits over this maximum. It is advisable for all students to take these tests early in their program.

Application forms are available through the Graduate Office, Applications for any scheduled date must be on file at the Education Testing Service Office, Box 995, Princeton, New Jersey, no later than fifteen days prior to the actual testing date. These tests are usually given in November, December, January, April, and July.

2. *The Area of Specialization Examination* — the Graduate student in the thirty (30) credit (Thesis) Program must take the departmental comprehensive (oral and/or written), when he has taken from 24-30 credits of work. In the thirty-four (34) credit (Non-Thesis) Program the student must take the departmental comprehensive examination (oral and/or written) when he has taken from 28-34 credits of work.

The Area of Specialization Examination is a comprehensive examination over the student's major field. The examination is constructed, administered and evaluated by the student's major department. All details of the Area of Specialization Examination are the province of the major department concerned. The degree candidate is urged to confer with his advisor concerning this examination at the earliest possible date.

It is the responsibility of the degree candidate to make application to take this final examination through the chairman of the department concerned.

EXPENSES

The charge for tuition in the Graduate Program is $16 per semester hour of credit, or $480.00 to complete the 30 graduate credits in the Thesis program for in-state students and $20.00 per semester hour of credit totaling $600.00 for the 30 hour Thesis program for out-of-state students.

Each graduate student is required to pay the binding fees for his Thesis or Research Report. The Thesis is bound with black covers and gold lettering on the spine. The Research report is bound with blue covers and gold lettering. Each Thesis will be spine stamped to include Title, Author, *Thesis,* and year. Each Research Report will be spine stamped to include Title, Author, and year. Binding fees are as follows:

THESIS

1 inch thick or less — 3 copies (required) ..... $3.45 each

More than 1 inch thick — 3 copies (required) ..... $6.30 each

RESEARCH REPORTS

3 copies ..... $3.45 each

Graduate students desiring housing facilities at the college during the summer sessions may procure such facilities at the regular rates listed in the official undergraduate catalogue.

Graduate Students applying for admission must pay a $10.00 application (processing) *fee, which is non-refundable.* Cashier's check or money order covering this fee is payable to the *Commonwealth of Pennsylvania.*

All other fees are due and payable on the DAY DESIGNATED FOR REGISTRATION, after which the late fee is applicable.

Car registration is $1.00.

Identification Card is $1.00 (Good for 6 years).

FULL-TIME GRADUATE STUDENTS (9 credits or more during any regular academic semester) are required to pay the I.G.A. student activities fee of $20.00.

All graduate students are required to pay any fees (activity fee, library fines, etc.) *required of other summer school students.*

ALL FEES ARE SUBJECT TO CHANGE WITHOUT NOTICE.

FINANCIAL AID

The following financial aid is available to graduate students:

1. National Defense Student Loans

   A. Applications available in the office of the Director of Financial Aid.

   B. Requirements for obtaining loan include need, a C+ average, and and three letters of recommendation, and Parents Confidential Statement.

   C. The amount for which graduate students may apply is $1,000 per year, with the average loan about $400.00.

   D. Re-payment Plans:
      (1) Repaid after graduation.
      (2) Loan principal reduced by 10% each year for a period of five years for those who teach. Total principal reduction will be 50%.
      (3) Students who do not teach must repay entire loan and must start repayments after graduation.
      (4) No interest due on loans until repayment starts.

2. Pennsylvania Higher Education Assistance Act Loans (State Loans)

   A. Applications are available in most State banks.

   B. Student may borrow $1,000 per academic year.

   C. Student must be making satisfactory academic progress toward degree.

   D. Repayment starts four months after graduation.

   F. Interest, which should be between 5-6%, is paid on a quarterly basis from the time the loan is awarded.

3. Graduate Assistantships

   A. Part-time instructorships

      A limited number of graduate assistantships are available each year. An applicant to be eligible must have had three years of successful teaching and/or have accumulated 15 hours of graduate credit at some accredited graduate school. The successful applicant will be expected to teach six hours of class work on the college level or assist in a laboratory. The applicant must enroll full time in the Graduate School at West Chester State College. The stipend is approximately $2,700, or two-fifths of an instructor's salary. For further information contact the Graduate Office.

   B. Federal Work-Study Program

      Under this program, the graduate student serves, as a Departmental Aide and may earn $1,800 during the academic year. The successful applicant will be expected to work fifteen hours per week for a total of 32 weeks. In addition, he will be required to work three forty-hour weeks at times when he is not engaged in any academic pursuits. To be eligible, the applicant must be accepted as a full-time graduate student at West Chester State College. Applications and information are available in the office of Mr. William Benner, Director of Financial Aid.

   C. Commonwealth Assistantships

      A limited number of Graduate Assistantships have been established by the Commonwealth of Pennsylvania. Students may earn up to $1200 per academic year. In terms of work hours per week it would average about fifteen hours. There is no restriction on the number of hours a student may work in a month. Each student must be a full-time graduate student. Applications and information are available in the office of the Graduate Studies.

HOUSING FACILITIES

Because this College infrequently has requests for housing by full-time graduate students during the fall and spring semesters, no provisions for the housing of these students are made. Graduate students attending the summer session may obtain housing in the college dormitories by contacting the Dean of Men or Dean of Women.

Graduate students living on campus during the summer sessions are subject to all officially stated regulations concerning housing and related matters.

There are a limited number of dormitory counselorships available to the full-time graduate student for which he may receive student wages. Further information is available in the office of the Dean of Women or the Dean of Men.

LIBRARY

The new Francis Harvey Green Library, completed in the Fall of 1966, is an attractive modern library building which offers the graduate student excellent facilities for study. Special features of the building include over 300 individual study carrels, a special collections room, a micromedia room, a soundproof typing room, a student-faculty lounge, a children's room, and a curriculum laboratory.

With a collection of over 150,000 volumes, and subscribing to more than 1200 journals, the Library is rapidly growing and an increasingly important resource for both teaching and research.

The Library's general collection is augmented by an extensive micromedia collection which includes English books published before 1640 as listed in Pollard & Redgrave's Short Title Index, The American Cultural Series which includes 5,000 titles printed in America before 1875, and the American Imprint Series, 1639-1800, the complete holdings of the titles indexed in Evan's American Bibliography. This collection of micromedia represents more than 52,000 titles on microprint. Extensive holdings of newspapers and periodicals are also part of the micromedia collection represented by over 8,650 reels of microfilm. Reading machines are available in the Library for all types of microforms in the collection.

The special collections room houses the Chester County Collection of Scientific and Historical Books, the Normal Collection (a collection of historical books on physical education and a collection of publications by and about the faculty and alumni), the *Biographies of the Signers of the Declaration of Independence*, with autographs of the signers, by John Sanderson, and the Shakespeare Folios.

Other collections of note are the juvenile, curriculum, and music collections and the Phillips collections of autographed books. Further, as part of a state wide program to promote world cultural understanding, the Library is developing an extensive collection of materials in French culture.

The many services of the Library are available to all graduate students. Of special interest are the reference and interlibrary loan services. The outstanding collections of many institutions are made available through interlibrary loan services.

LIBRARY HOURS

DAILY

	Main Library	*Music Library*
Monday thru Thursday	7:30 A.M. - 11:00 P.M.	7:30 A.M. - 9:30 P.M.
Friday	7:30 A.M. - 5:00 P.M.	7:30 A.M. - 4:30 P.M.
Saturday	8:00 A.M. - 5:00 P.M.	9:00 A.M. - 12 Noon
Sunday	2:00 P.M. - 11:00 P.M.	CLOSED

Holidays and college vacation periods as posted.

These hours are subject to change. For most accurate listing, consult the directory posted outside the main entrance to the library.

MARKING SYSTEM

The marking system employed in the Graduate Program is as follows:

	Grade Points
A—Superior	4
B—Above Average	3
C—Average	2
D—Below Average (Not Acceptable for a Degree)	1
W.F.—Withdrew Failing	
W.P.—Withdrew Passing	
W.—Withdrew	
F—Failure	
I—Incomplete	

The following restrictions are enforced in the marking system:

1. The student must maintain an over-all average of at least 2.75. (A=4.0)
2. Grades lower than C are not acceptable in satisfying degree requirements.
3. Courses which, for some valid reason (unavoidable absence during final examination, etc.), are not completed by the end of a given semester must be completed within 90 calendar days following the close of the semester or the grade is recorded permanently as F (failure). This does not apply to the course Res. 500 and the Thesis or Research Report.

MUSIC FEES

Students in the music curriculum are subject to the schedule of fees listed below:

INSTRUCTION

Piano, Organ, Instrument or Voice
½ hour private lesson ..... $55.00 per semester

Instrument class or Ensemble
2 hours per week ..... $35.00 per semester

RENTALS

Any Band or Orchestra Instrument ..... $1..00 per week

PRACTICE TIME

Piano Room — 2 hours per day ..... $1.00 per week
(minimum charge — $3.00)

Organ Room — 2 hours per day ..... $1.50 per week
(minimum charge — $4.50)

Instrumental Room — 2 hours per day ..... $ .50 per week
(minimum charge — $1..50)

NOTE: The lesson fees are in addition to the $16.00 semester hour credit fee for in-state students or $20.00 semester hour credit fee for out-of-state students.

All fees are subject to change without notice.

OFFICE HOURS

The Graduate Office is located in Rooms 102, 104, 104A on the first floor of Anderson Hall. During the academic year, office hours are from 8:30 A.M. to 12:00 noon and from 1:00 P.M. to 5:00 P.M. daily, Monday through Friday. The office is open on the fourth Saturday morning of each month from 9:00 A.M. to 12:00 noon. Summer hours are from 8:00 A.M. to 12:00 noon and from 1:00 P.M. to 4:30 P.M.

PERMANENT CERTIFICATION

The Permanent College Certificate requires three years of successful teaching in the public schools of the Commonwealth of Pennsylvania under the Provisional College Certificate. Also required is the satisfactory completion of the needed number of semester hours of post-baccalaureate work. This number is determined by the following dates:

1. Provisional College Certificates issued after October 1, 1959, require for validation for the Permanent Certificate the completion of twelve semester hours.
2. Provisional College Certificates issued after October 1, 1963, require for the Permanent Certificate the completion of 24 semester hours including twelve semester hours in an academic content area, unless otherwise specified, and the remainder in general education, professional education, or subject matter specialization, or a combination of these.

Courses taken to extend a College Provisional Certificate to include additional fields may be used to make the Certificate permanent.

Any student who completes the Graduate Program at West Chester State College in his major area of concentration and receives the College's recommendation will be entitled to Permanent Certification provided the other requirements for such a Certificate have been met.

PLACEMENT SERVICE

Every year the College Placement Service is notified of many positions of all types on all levels of instruction. Because many of these positions offer unusual opportunities for professional advancement, graduate students are encouraged to use the services of the Placement Office.

All students pursuing graduate work at West Chester are eligible for the use of limited services provided by the Placement Service. Students who have completed less than 15 semester credits have access to the listings of vacancies. Students who hold undergraduate degrees from West Chester and/or have completed 15 semester credits of graduate work are eligible for the full services of the Placement Service. The term "full service" includes registration, development of a complete set of credentials, and mailing of credentials to prospective employers.

There is no charge for the use of the Placement Service. Students wishing further information should visit the Placement Office. The office is open from 8:30 A.M. to 5:00 P.M. on weekdays and from 8:30 A.M. to 12 Noon on some Saturdays. (See Campus Map for location of the Placement Office).

RESEARCH REQUIREMENTSS FOR THE DEGREE

The candidate for the Master's Degree at West Chester State College must satisfy the research requirement established by the Graduate Council. This requirement is that he must conduct an independent study related to his major field or specialization in the form of a Thesis or Research Report.

The study may be in the subject matter field or in professional education. A Thesis will carry three credits of graduate work in the 30-credit (Thesis) program. The Research Report will carry from one to two credits of graduate work applied to the 34-credit (Non-Thesis) program. (Consult the Department Chairmen for individual department requirements).

The decision to take the Thesis program or the Non-Thesis program is subject to the approval of the adviser who will consider the question on the basis of the student's needs and ability.

The conduct of a research study results in professional growth usually not attainable through other forms of study. The completed Thesis or Research Report indicates the student's ability to identify a research topic and to pursue research in his field of specialization. An acceptable Research Report should show evidence that the student:

1. Has made a comprehensive study of the literature in his field of specialization.
2. Has made an intensive and independent study of the problem.
3. Has a practical working knowledge of research procedures.
4. Has demonstrated his ability to write in a professional style.
5. Has reached justifiable conclusions from his research study.

DISTINCTION BETWEEN A RESEARCH REPORT AND THE THESIS

The Research Report must be aimed at developing the student professionally in his major field. While the Thesis must have the same basic aim, it is much more extensive and hence more demanding of the student's time and abilities.

The Graduate Council has defined the Research Report and the Thesis as follows:

> A Research Report is a written record of a scientific investigation to determine the facts of a condition; hence it is essentially a report on a problem. It demands of the researcher a knowledge of the techniques of research and scientific accuracy.
>
> A Thesis is the written account of an exhaustive research to support or refute a belief or a hypothesis. It differs from the Research Report in that it is more comprehensive and more generally demanding of the writer's knowledge, skills, and general powers of scholarship.

The student who plans to work eventually toward a degree should make his decision early regarding the Research Report or Thesis. In no case should he defer the matter until a late moment in his course because the work involved in the Research Report or Thesis will undoubtedly extend over two or more semesters.

In thinking of the Research Report or Thesis, the student should take special note of the statements listed below. These statements represent official policy of the Graduate Council regarding the Research Report or Thesis.

1. The student should register his decision to do a Research Report or the Thesis at the completion of the course entitled Methods and Materials of Research. Thus the student's later selection of courses will be affected in part by his decision regarding this matter.
2. The department concerned must approve the subject of the Research Report or Thesis as a challenging, soundly executed professional task, worthy of Master's level achievement.
3. A detailed outline of the Thesis must be approved by the Graduate Dean before the student is authorized to begin his investigation. This must be on file 30 days before final approval can be given.
4. When the Thesis or the research report has been approved by the Department, it must be typed and bound in accordance with specifications established by the Graduate Council. These specifications are on file in the offices of the Department Chairmen. *The Form and Style in Thesis Writing*, by Campbell, must be used as a format. The Thesis

or Research Report should be submitted for binding to the Graduate Office. (Refer to the section on Expenses for binding fees.)

5. The student who submits a Thesis in partial fulfillment of degree requirements must present three bound copies to the Division of Graduate Studies. These must be accompanied with three copies of the abstract (250-500 words). The original copy of each will be retained by the Graduate Office and the remaining copies will be given to the college library and the major department.

REFUNDS

1. Withdrawals occurring before the second scheduled class meeting—REFUND OF ALL BUT $10 OF THE FEES PAID.
2. Withdrawals occurring no later than one-third of the scheduled class meetings—REFUND OF ONE-HALF OF THE FEES PAID.
3. Withdrawals occurring after one-third of the scheduled class meetings—NO REFUND.

Note: Refunds will not be made to students who are suspended or dismissed or to students who drop courses without the approval of the Dean of Graduate Studies.

REPORTS

Official grade reports are issued immediately after the termination of each semester for work taken during that semester. The student should consider these reports as an official record of his standing in the graduate program and should check these reports against grade requirements and other regulations. When consulting with faculty advisors, the student should have these reports at hand.

RESIDENCE REQUIREMENTS

All courses given by the Division of Graduate Studies are taught on this campus by members of the Graduate Studies faculty. Therefore, students in this graduate program should not expect to take off-campus or extension courses.

This college will accept in transfer only courses taken in residence at other approved graduate schools if the transcript clearly states that the courses taken were given graduate credit. There shall be a minimum residence requirement for the Master of Education degree, i.e., the graduate student must take a minimum of two courses of graduate work during a Regular Summer Session if he is not a full time graduate student during one of the Fall or Spring Semesters.

ROOM CODES

AH	Anderson Hall
DS	Demonstration School
EhG	Ehinger Gym
FHGL	Francis Harvey Green Library
HFH	Hollinger Field House
LCDH	Lawrence Center Dining Hall
LCL	Lawrence Center Lounge
PMA	Philips Memorial Auditorium
PMB	Philips Memorial Ballroom
PML	Philips Memorial Library
RecH	Recitation Hall
R208	Recitation Hall Room 208
SEB	Special Education Building
SSC	Schmucker Science Center
SH	Swope Hall

STUDENT LOAD

During summer session, the normal program of a graduate student consists of one semester hour of work for each week of the summer term.

During the college year, a regularly employed teacher may register for not more than six semester hours of courses during a semester unless his schedule is approved by the Dean of Graduate Studies.

A full-time graduate student may take 9 or more semester credits of work, providing he has the approval of the department chairman to do so.

SUMMER SESSIONS

The twelve-week summer session is divided into three periods: the Pre-Session of three weeks, the Regular Session of six weeks, and the Post Session of three weeks. Credit may be earned at the rate of one semester hour per week of work.

All prospective summer session students must fill out a Registration Form giving the information requested as well as the courses they wish to take during any one of the sessions. A Registration card must be completed for each of the summer session periods (Regular, Pre and Post) and is to be returned to Dr. Willard J. Trezise, Dean of Graduate Studies. West Chester State College, West Chester, Pennsylvania 19380.

Registration for these three summer periods will be made according to Summer Sessions Bulletin. Any student who fails to register by the deadlines indicated will be subject to a late fee. In addition, there will be a change of course fee for the student who desires to make a change of course after having registered. Therefore, to avoid the change of course fee, all changes must be made prior to the aforementioned three deadlines. ALL SUMMER SESSION FEES ARE DUE AND PAYABLE WHEN SPECIFIED. ALL FEES ARE SUBJECT TO CHANGE WITHOUT NOTICE.

Various expenses and fees are included in the following information: Room and board at the college is $18 per week. The activity fee for the Regular Session is $3.50; for the Pre and Post Sessions, $1.75 each. The charge for courses is $16 per semester hour of credit for in-state students and $20 per credit for out-state students. Graduate students planning to use the college parking facilities must obtain a college car decal at a cost of fifty cents for the Summer Session.

An Identification Card is required of all graduate students. The college library, and other college, university, and public libraries within the area, have been requested not to extend library privileges to West Chester graduate students until they present their I.D. card. The cost of the card is $1 and the card is in effect as long as the student is active in the Graduate Program, up to a period of six years.

For further information regarding expenses, consult the special catalogue issued by the Graduate Office each summer.

SUSPENSION OF CLASSES BECAUSE OF THE WEATHER

The official calendar for the Graduate Program lists the class meeting dates for each session. This calendar is distributed to faculty and posted on the official bulletin boards every semester.

All classes meet on these days, regardless of weather conditions. This policy has been instituted, however, with the understanding that students need not take undue risks in order to travel.

Students absent because of weather conditions must assume responsibility for all work missed.

TIME LIMIT

All requirements including transfer of credits for the graduate degree, i.e., Master of Education, must have been satisfied within a period of six years before the actual date of receiving the degree. In unusual cases, eg., prolonged illness, the Graduate Council may make minor exceptions. In no instance, however, should the student assume that such exceptions will be made routinely.

The existence of the six-year limit makes it imperative to settle, at the earliest possible date, details regarding the research report or thesis and similar matters.

TRANSCRIPTS

Students wishing transcripts of graduate work at West Chester may obtain such transcripts by communicating directly with the Office of the Registrar. The regulations pertaining to undergraduate transcripts hold for the graduate program also, i.e., students should allow a minimum of one week in requesting transcripts; requests should be made in writing; and all pertinent information (full name, maiden name, curriculum, dates, etc.) should be given.

The cost is $1 per transcript. Checks or money orders should be made payable to the Commonwealth of Pennsylvania. Cash is not acceptable.

WITHDRAWAL FROM COURSES

If a student wishes to withdraw from a course, he should do the following:

1. He must file an official withdrawal form in the Graduate Office. These forms are available in that office.
2. He must file a written form prior to the sixth meeting of the class. Otherwise, his record card will show a W.P. (withdrawing passing) or W.F. (withdrawing failing).
3. All changes from credit to audit must be done prior to the sixth meeting of the class to be valid.

All withdrawals are subject to the rules established for refunds. Refer to that section of the bulletin.

Any student withdrawing from a class without official authorization is automatically disqualified from the Graduate Program. He can be admitted to further graduate study only through application to the Graduate Council.

V. COURSE DESCRIPTIONS

Semester Credits

Bio 501 Introductory Biochemistry for Teachers 3

A elementary course in biochemistry designed to provide a background for the teaching of biology courses in the high school. The topics under discussion will include elements of organic chemistry, solutions, buffers, enzyme action, and the structure and metabolism of biological compounds. Some illustrative laboratory exercises will be undertaken.

Prerequisites: Two semesters of undergraduate biology plus laboratory experience. Some knowledge of inorganic and organic chemistry is desirable but not essential.

Bio 503 Modern Techniques of Teaching Biology 2

A course designed to acquaint teachers with recent methodological approaches in the teaching of biology. Instructional techniques are presented which are intended to reflect changes in emphasis placed on the various levels of biological organization. Preparation for and presentation of laboratory experience will be stressed.

Bio 511 Systematic Botany 3

Major concepts and principles of taxonomy and biosystematics are considered. Selected important plant families from both tropical and temperate zones are covered in detail. Each student will develop proficiency in the use of a modern flora, and a knowledge of the common species of one spring flora of Chester County.

Prerequisite: Botany I and II or permission of instructor.

Bio 512 Plant Growth and Development 3

A comprehensive study of the factors controlling plant growth and development is considered against a background of plant physiology. Topics covered include the formation of zygote, development of embryo and plant tissues, development of reproductive structures, plant growth regulators, and the influence of environmental factors on plant growth.

Prerequisites: Two semesters of college botany, general chemistry, or the permission of the professor.

Bio 513 Limnology 3

A course dealing with the physical, chemical, and geological features of the freshwater environment as related to the biology of the freshwater algae.

Prerequisites: Two semesters of college botany, one semester of general ecology.

Bio 514 Plant Pests and Diseases 3

The nature of parasitism and pathogenic activity of organisms which produce infectious diseases of turf, agricultural crops, ornamental plantings, and flowers are studied, using specific organisms as examples. Diagnosis of plant diseases, isolation of pathogenic organisms, and modern methods of control are stressed.

Prerequisites: Two semesters of college botany, Mycology I, Plant Growth and Development, or the permission of the professor. Regular Summer Session 1969 and alternate summers.

Bio 517 Advanced Plant Anatomy and Morphology 3

A detailed examination of the macroscopic and microscopic structure of plants and plant parts is undertaken. Topics of study include

theories of the development of plant tissue, cell differentiation, meristematic activity, formation and anatomy of reproductive structures, types of vascular steles, the primary body, secondary body, and anomalous growth, plant embryo development, and fruit development.

Prerequisites: Two semesters of college botany, Biology 512, or the permission of the professor.

Bio 522 Ecology for Teachers 3

Four basic ecosystems will be studied in the field: the aquatic, the forest, the field, and the urban. Sampling methods and interpretation of data will be stressed. The course will include some experience in Field Ecology, and the identification of common plants and animals and soil types.

Prerequisites: Two semesters of Biology or permission of the instructor.

Bio 524 Experimental Biology I 3

Techniques in demonstrating body functions and animal behavior. Humanely conducted operations will utilize several types of invertebrates as well as fish, frogs, and rodents. These are designed to demonstrate reflexes, tropistic responses, enzymatic digestion, peristaltic movements, circulation of the blood, metabolism, normal and anomalous growth.

Prerequisite: Completion of a major field in biological science.

Bio 525 Experimental Physiology for Teachers 3

A study of the fundamental physiological processes such as nutrition, respiration, excretion, growth, reproduction, and general response to changes in environment as is seen in microscopic animals and plants.

Prerequisite: Zoology I and Botany II, or a general course in Biology.

Bio 526 Biochemistry I 3

A course dealing with the structure and chemistry of biological compounds including carbohydrates, fats and proteins and phosphorus compounds.

Prerequisites: One year of inorganic chemistry and at least one semester of organic chemistry.

Bio 527 Biochemistry II 3

This course is a continuation of Biochemistry I, which includes such topics as bio-energetics, enzymology and carbohydrate, fat and protein metabolism.

Prerequisites: Same as those for Biochemistry I or their equivalent.

Bio 530 Genetic Theory 3

Studies in the theory of mutation of genes, chromosomal mappings, chromosomal abnormalities, the principles of dominance and recessiveness, multiple factors, lethal factors and their association with visibles. The nature of D.N.A. explored.

Prerequisite: Basic Biology or Zoology I and II or Botany I and II.

Bio 532 Experimental Genetics 3

Consideration of inheritance from the point of view of cellular biology with modern concepts of the structure and chemistry of chromosomes and the nature of the genes. Experimental work in the production

of mutations in germ cells and somatic cells and the effects of radiations upon tissues.

Bio 533 Advanced Embryology I 3

A study of the principles of developmental biology illustrated by laboratory work consisting of a comparative, anatomical, and histological study of the early embryonic stages of vertebrate embryos. (1 hr. lecture, 3 hrs. laboratory) Prerequisites: College biology or zoology, two semesters of chemistry.

Bio 534 Advanced Embryology II 3

A continuation of Bio. 533. Study of the later stages of vertebrate embryonic development. Also an introduction to current research areas and experimental techniques. (one hour of lecture, three hours of laboratory)

Prerequisites:Bio 533 or one semester of embryology and 2 semesters of chemistry or permission of the instructor.

Bio 538 Systematic Zoology 3

Principles and procedures governing the classification of animals.

Prerequisite: College biology.

Bio 539 Insect Morphology 3

A study of the structure of insects with emphasis on the variations of form in the principal orders.

Prerequisite: College biology.

Bio 541 Economic Entomology 3

Beneficial and deleterious influences exerted by insects upon man's welfare.

Prerequisite: College biology.

Bio 542 Animal Ecology 3

Interrelationships of organisms and the environment including physical and biological factors. Topics for discussion and investigation will include animal distribution, procuring food, escape from enemies, surviving climatic extremes, reproduction, and community organizations. Field trips to study a variety of terrestial and freshwater habitats will be required.

Prerequisite: Two semesters of college zoology or general biology.

Bio 543 Freshwater Invertebrates 3

Morphology, taxonomy, and bionomics of our local freshwater invertebrates.

Prerequisites: College biology.

Bio 545 Developmental Anatomy 3

A review of the anatomy of the human reproductive systems and the fundamentals of human development. Students make a survey of current literature dealing with the origin of sperms and ova and the sexual cycles. The establishment of several functional systems of the human body is studied, with constant reference to those in chicks and monkeys. A term paper is required which will be presented to the class group.

Prerequisite: Anatomy, physiology and embryology courses.

Semester Credits

Bio 546 Microtechnique I 3

Study and use of modern histological and histochemical techniques (one hour of lecture, three hours of laboratory).

Prerequisites: two semesters of college biology, two semesters of college chemistry or permission of the instructor.

Bio 547 Microtechnique II 3

A continuation of Bio 546. The study and use of histological and histochemical techniques. (one hour of lecture, three hours of laboratory)

Prerequisites: Bio 546 or permission of the instructor.

Bio 561 Human Heredity 3

The in-born qualities of human beings and their genetic basis. This subject deals with both physical and mental aspects, normal and sub-normal, including such topics as linkage, crossing-over, mutations, natures of the genes, multiple alleles, multiple genes, incomplete dominance, lethal genes, relationship to heredity and environment, and effects of radio-active substances.

Prerequisite: A course in general genetics or two semesters of a biological science.

Bio 571 Advanced Bacteriology 3

Diagnostic procedures and minor problems in microbiology, immunology and immunochemistry. The fields of medical mycology, virology, and use of antibiotics will be examined.

Prerequisite: Completion of a field in science, including two semesters of chemistry and an undergraduate course in bacteriology or microbiology.

Bio 573 Animal Histology 3

A study of the structure and function of animal tissues and organs. (3 hrs. lecture/lab) (Prerequisite: college biology or zoology)

Bio 575 Mycology I: Morphology of Fungi 3

A study of the form and structure of fungi is considered against a background of fungal taxonomy. Specific organisms are studied in detail as examples of important morphological, anatomical, and reproductive features of the various classes of fungi.

Prerequisites: Two semesters of college botany, or the permission of the professor. Spring 1969 and alternate years.

Bio 576 Mycology II: Physiology of Fungi 3

A detailed investigation of the physiological activities of fungi is considered. Topics of study include intermediate metabolism, the nature of parasitism, environmental requirements for growth, sporulation, and spore germination, sexual and asexual reproduction, and the importance to man of the physiology of fungi.

Prerequisites: Two semesters of college botany, general, organic, and biochemistry, Experimental Biology I, Physiology of Plants, or the permission of the professor.

Bio 591 History of Biology 3

Great discoveries in the field of biology and related literature from that of Theophrastus to the present should be evaluated. Emphasis will be placed on the philosophical implications of these discoveries

and the economic changes which have resulted from the major discoveries.

Prerequisites: College zoology, college botany and a field of at least 24 semester hours in science.

Bio 599 Research Seminar 2

The analysis and writing of the research report. This seminar is required of all students who do not elect to write a thesis.

Bio 600 Research Report 0-2

Bio 610 Thesis 3

SERVICE COURSES IN BIOLOGY OPEN TO ALL CURRICULA

Bio 510 Field Ecology and Natural History 3

Designed to provide sufficient background in ecology and natural history so as to encourage and enable teachers to make use of outdoor learning resources. The course will emphasize basic environmental processes and concepts. Lectures and demonstrations will be supported through extensive field experiences.

Bio 523 Resource Material in Elementary Science 3

A course designed to acquaint the elementary school teacher with the resource material in his community and elsewhere that is essential to the curriculum of the modern elementary school. Although this course is designed primarily for elementary school teachers, it should prove profitable to administrators also.

Bio 540 Applied Ecology 3

Lectures, field trips, guest speakers, and seminar type discussion will be used to demonstrate how the principles of Ecology are applied in the practice of resource management. The areas covered include Forestry, Wildlife Management, Park Management, and Agricultural and Urban planning.

Prerequisite: Bio 522 or an equivalent basic course in Ecology.

Sci 595 Elementary Science Curriculum and Instruction 3

Methods and materials used in teaching science in elementary grades; demonstration experiments adapted to elementary classroom work; curriculum planning; recent research and its application; field trips.

Bio 596 Independent Study in Elementary Biological Science (1-3)

Proposed research project must be approved by the faculty member with whom the student will work; such approval must be obtained prior to registration for the course.

CHEMISTRY

Che 500 Methods and Materials of Research 2

(Technical Report Writing)

Fundamental aspects in preparing scientific reports will be studied. Everyone has to demonstrate the preparation of a single,

complete and effective technical report. Several types of reports will be studied and the use and significance of each type will be described.

Che 501 History and Philosophy of Chemistry 2

The development of chemical theories; the ancient and modern chemical industries; the rise of the experimental method; the impact of great chemical discoveries on industries and nations.

Che 502 Modern Trends in Teaching Chemistry 2

The modern techniques of teaching the fundamental theories and laws of chemistry will be studied and demonstrated through the use of audio-visual equipment, laboratory demonstrations, and atomic and molecular models. Understanding of modern research methods will be approached through instrumental techniques that have been of scientific success in many phases of scientific endeavor in recent years.

Che 503 Chemical Literature 1

A study of the published source material of chemical science and chemical industry, to learn how to use the chemical literature and to understand the classification of books and periodicals. The course will include practical instructions in library techniques and help the student to understand the modern method of information retrieval.

Che 504 Glass Manipulation Techniques 1

This course is designed for the student to learn various techniques of glass manipulation, to be able to repair broken laboratory glass-wares, and to be able to fabricate, through glass blowing, some custom glass equipment.

Che 511 Advanced Inorganic Chemistry 3

Theoretical treatment of the properties and structure of the elements and their compounds; descriptive study of the elements in their periodic table based in horizontal, vertical, and diagonal relationships.

Che 513 Principles of Geochemistry 3

The migration and distribution of the chemical elements within the earth will be discussed. The chemistry of the lithosphere, atmosphere, hydrosphere, and biosphere will be examined. The chemical changes that occurred during the history of the earth will be investigated. The structure of the earth and the geochemical cycle will be discussed.

Prerequisites: Inorganic Chemistry II and a course in geology.

Che 515 Inorganic Preparations 2

A laboratory course in the synthesis of inorganic materials, involving modern techniques.

Prerequisite: Permission of instructor.

Che 517 Mineralogy for Teachers 3

(This is the same course as Physical Science 521)

Properties and occurrence of the common and industrially important minerals and their identification in the laboratory will be investigated. The origin and economic importance of minerals will be studied. The elementary principles of optical, morphological, and X-ray crystallography will be examined.

Prerequisites: Inorganic Chemistry II.

Semester Credits

Che 521 Advanced Analytical Chemistry 3

A study of chemical equilibrium and the kinetics and mechanisms of chemical reaction. It will include advanced analytical methods and techniques and analyses as well as theories and application of chemical instrumentation.

Che 522 Instrumental Methods of Analysis 3

A study of the theories and application of modern instrumentation in analytical chemistry including laboratory techniques in potentiometry, X-ray, polarography, spectrophotometry, conductivity, chromatography, calorimetry and spectrascopy. 2 hours lecture and 3 hours laboratory.

Che 523 Industrial Chemistry Processes 3

This course studies the various unit processes and how they are applied to the manufacture of chemicals and some industrial products. It also explores the multiple use of equipment involved in various unit processes of the chemical industry, and studies the industry's use of instrumentation and control. The significance of chemical research to the processes and economy of industry is examined.

Che 531 Advanced Organic Chemistry 3

Advanced treatment of synthesis and properties of organic compounds approached from the mechanist point of view.

Che 533 Physical Organic Chemistry 3

Bonding and spectra of organic molecules; theoretical treatment of important equilibria in organic reactions, e.g. linear free energy relationships; kinetics and mechanisms of organic reactions.

Che 535 Qualitative Organic Analysis 3

A laboratory course devoted to the identification of both pure organic compounds and mixtures of organic compounds using classical and modern instrumental techniques.

Che 538 Organic Preparations 2

Some recent techniques in organic synthesis will be attempted and students will be encouraged to exercise their own judgment in working out procedures.

Prerequisite: Che 531

Che 540 Advanced Physical Chemistry 3

Chemical thermodynamics of solutions, kinetics of reactions, and relation of molecular structure to physical properties.

Che 541 Special Topics in Physical Chemistry 3

A course designed for students who have had only one semester of under-graduate physical chemistry. The topics to be covered will depend largely on the needs of the students, but will most likely include chemical thermodynamics, chemical kinetics, electrochemistry, and chemical equilibrium.

Che 545 Chemical Thermodynamics 2

The fundamental laws and functions of thermodynamics and the principles of their applications to chemistry; introduction to statistical thermodynamics.

Prerequisite: Che 541 or its equivalent.

Semester Credits

Che 551 Chemistry of Coordination Compounds 3

The study of the principles involved in complex formation; i.e. application of the crystal field theory, various kinds of complexing agents and the chemical implications of coordinated compounds.

Prerequisite: Che 511.

Che 561 Nuclear and Radio Chemistry 2

An introduction to the study of nuclear reactions, emission of various particles, and radio chemical applications.

Prerequisite: Che 511.

Che 563 Electrochemistry 3

Study of the principles of electrochemical systems and Galvanic cells; particularly electrolytic applications in instrumentations and research.

Prerequisite: Che 511.

Che 581 Research 1-2

Individual reading, conferences, and research on problems in contemporary chemistry.

Prerequisite: Permission of department.

Che 591 Seminar 1-2

Presentation of written and oral reports on topics of current interest in chemistry.

Prerequisite: Permission of department.

Che 610 Thesis 3

EDUCATION

(A course in the foundations of education, or its equivalent, is prerequisite to all courses.)

EdS 502 Secondary School Curriculum 2

A survey of current practices and trends in reorganizing and reorienting the secondary school curriculum, with emphasis on the various integrating techniques. Attention is given to understanding curriculum development and best procedures for accomplishing this development. Each of the major academic areas taught will be studied.

EdS 506 The Junior High School 2

The development, function, and philosophy of the early years of secondary school. A study of the curriculum, teaching assignments, characteristics of pupils, and special problems of the junior high school.

Prerequisite: A course in Adolescent Development or its equivalent.

EdS 508 The Core Curriculum 2

The theory and philosophy underlying the core curriculum. A study of specific school core programs in secondary schools will be studied and evaluated.

Semester Credits

EdF 509 Contemporary Teaching Trends 2

A study of the newer trends of teaching in the elementary and secondary school with respect to effective adaptation of these newer practices to the curriculum. Such areas as team-teaching, programmed instruction, and various media of communication will be evaluated.

EdF 520 Comparative Education 3

Major problems of education in a number of foreign countries in relation to similar problems in the United States. Attention is given to the reasons for the various patterns of education in terms of purposes and philosophies as they pertain to differences in organization and administration.

EdE 524 or EdS Supervision and Student Teaching 3

Designed especially for cooperating teachers working with West Chester State College student teaching program and prospective cooperating teachers. Opportunity is provided for the development of pertinent materials and the evaluation of current resources. Stress is given to existing and projected porcedures of training teachers. Basic principles underlying an effective student teaching program are examined. Prerequisite: College degree and/or service as a cooperating teacher.

EdE 525 The Teacher and Administrative Leadership 2

A study of processes and methods of local leadership and participation by the classroom teacher, including an understanding of human relations. The relationship between the classroom teacher and other school personnel.

EdE 541 Creative Teaching 2

Study of the nature and conditions associated with creativity along with skills and techniques most likely to result in the full development of the creative potential of the learner.

Prerequisite: A course in Educational Psychology or its equivalent.

EdA 542 Curriculum Development for Culturally Disadvantaged Children 2

Historical presentation and analyses of curricular innovations attempting to aid the culturally disadvantaged in developing skills necessary for maximal personal adjustment to society. A study will be made of both the school and community's responsibility in this area. A variety of appropriate resources will be used. (Open by Permission of instructor).

EdP 550 Advanced Educational Psychology 3

Intensive study of the processes by which skills, understandings, concepts and ideals are acquired; examination of teaching practices in relation to basic research on learning. A study of similarities and differences in learning theories.

Prerequisite: A course in Educational Psychology or its equivalent, and Edu 500.

EdS 566 The Activity Program in the Secondary School 2

This course is designed to provide the student with an understanding of the activity program in the secondary school curriculum. Emphasis will be given to best practices in how to organize and administer the

program. It is designed to help the faculty adviser better understand his role in working with the homeroom, study halls, interest clubs, publications, assembly programs, student government, athletics, music, dramatic organizations and the like.

EdF 580 History and Philosophy of Education 3

Individual and group research employed to study the historic background and development of education and the co-ordinate influences which diverse philosophies have had on educational practices in a democratic social order.

Prerequisites: Edu 500 and Edu 510.

EdF 590 School Law 2

A course dealing with the legal background of educational organization in various states as it pertains to the role of the state itself, the intermediate and the local units. Particular attention will be paid to the legal status of the school board, the rights and privileges of the teacher, the board and the child. Much will be made of the case study technique.

Res 591 Research Seminar in Elementary Education 1-2

Students who have not completed their primary research projects in Edu 500, Methods and Materials in Research, must take this course following semester to complete research project. The depth of the problem will determine the number of credits to be given. Special attention will be given to format, design, and statistics.

Prerequisites: Edu 500 and Edu 510.

EdC 500 Principles and Techniques of Guidance 2

A course concerned with the factors involved in educational, occupational, and social adjustments and how to secure, classify, analyze, interpret, and evaluate these factors for intelligent use by teachers and guidance workers.

Prerequisite: A basic course in psychology or guidance.

EdC 564 Homeroom Guidance 2

A thorough study of the guidance function as it pertains to the homeroom teacher. Special emphasis is given to this form of guidance in the junior high school.

Prerequisite: Educational Psychology, and an introductory course in guidance.

EdC 567 Group Guidance 2

A study of the interactional processes involved in inter-group and intra-group situations with reference to the school program. Special attention is given to the role of the group leader. Opportunities are afforded students to participate in group thinking and behavior and to evaluate the performance of groups.

Prerequisite: An introductory course in guidance.

EdC 570 Principles and Techniques of Interviewing and Counseling 2

A study of theory and practice in interviewing as used in counseling and for other purposes involving person-to-person contact. Opportunities for actual practice in interviewing will be offered.

Prerequisite: Gui 500, and either Psy 552 or Psy 557 (or the equivalent.)

Semester Credits

Psy 557 Psychology of Adjustment 2

The principles of mental hygiene are studied in depth and in relation to emotional and social adjustment.

Prerequisite: General Psychology and Psy 562 or equivalent.

Psy 562 Psychology of Personality 2

This course deals with the interaction and effects of the forces that affect personality development. Normal and neurotic development are contrasted, and the principles of personality measurement are explored.

Prerequisites: General Psychology, Educational Psychology and Human Development.

EdA 570 Psychology of Mentally Atypical Children 2

The status and characteristics of the mentally atypical child. The course is concerned with the mentally superior as well as the mentally retarded child.

Prerequisite: General and Educational Psychology, or the equivalent.

EdA 571 Methods and Materials for Mentally Atypical Children (Elementary) 2

A course dealing with the best practices for developing effective methods and materials for meeting the needs of mentally atypical children. Emphasis is on motivating the individual for accomplishing maximum capabilities as well as teaching groups to strive for proper adjustment and maximum achievement.

Prerequisite: Psy 570 or equivalent.

EdA 574 Methods and Materials for Mentally Atypical Children (Secondary) 2

Same as course number 571 with emphasis on teaching secondary school pupils.

Prerequisite: Psy 570 or equivalent.

EdA 575 Psychology of Physically Atypical Children 2

The status and characteristics of children who deviate from the physically normal. A survey of sensory and orthopedically handicapped children and the social and psychological effects of such handicaps.

Prerequisites: General and educational Psychology, or the equivalent.

EdA 576 Methods and Materials for Physically Atypical Children 2

A study of the best practices for developing effective methods and materials for meeting the needs of physically atypical children. Both individualized and group instruction methods are emphasized.

Prerequisite: Psy 575 or equivalent.

EdA 540 Workshop in Special Education 4

The Workshop will provide an opportunity to undertake an intensive program of observation and instruction of mentally retarded or physically handicapped children. Actual instructional experience with an atypical child will be combined with lecture, demonstration and case study. This Workshop is primarily for in-service teachers. (By permission of instructor).

EdU 501 Curricular Adaptations for the Culturally Disadvantaged 3

Historical presentation and analyses of curricular innovations attempting to aid the culturally disadvantaged in developing skills necessary for maximal personal adjustment to society. An examination of both the school and community's responsibility in this area. Resources will be recruited from appropriate industrial and school programs.

EdU 502 Human Relations and the Community 3

Community experiences will be set up to give the student opportunities to become aware of the community. Course work related to community experiences will provide data concerning the community presented by a variety of professional community workers. College staff will present broader experimental and descriptive data so that students may relate the school society to the total community.

AUDIO-VISUAL EDUCATION

EDUCATIONAL MEDIA SPECIALIST

EdM 500 Methods and Materials of Research 2

Provides for an examination and review of research in audio-visual communication which has been reported. Prepares the student for utilizing research findings and enables him to study and prepare research problems in audio-visual education. Introduces general and specific topics and methods for applying research to answer problems relevant to audio-visual communication.

Prerequisite: Edm 501 or a recent basic A-V course.

EdM 501 Orientation to Educational Media 3

This course is designed for those in-service teachers who desire to meet the Commonwealth's requirement for permanent certification. Consists of a survey of the field of modern educational media with opportunities for laboratory activities.

EdM 502 Selection and Effective Utilization of Educational Media 2

A second course in Educational Media for those who are working toward their Educational Media Certification and others who desire an advanced course in the field of Educational Media. Consists largely of the evaluation of Educational Media of diverse types and means of integrating these materials into the instructional situation.

Prerequisite: EdM 501 or the equivalent.

EdM 505 The Motion Picture in Education 2

This course deals with the history and development of motion pictures generally and educational motion pictures specifically. The nature and use of the various cinematographic techniques, such as animation, time lapse, slow motion, etc., are analyzed. The impact of the various types of motion picture—35 mm., 16 mm., and 8 mm.—will be examined with a section dealing specifically with the single concept instructional film. Course includes evaluation of diverse types of films with respect to types of learning and the role of the motion picture. Limited examination of research in the use of educational motion pictures.

Semester Credits

EdM 508 Audio-Visual Materials in the Elementary School Curriculum 2

Practice in techniques of using and evaluating the modern communications media in the classroom; correlation of audio-visual materials and techniques with the modern elementary school program.

Prerequisite: A basic A-V course.

EdM 509 Audio-Visual Materials in the Secondary School 2

This course examines the use of instructional materials in the present-day secondary school; further, an investigation is made of the role of audio-visual materials in the expanding area of subject matter to be taught in the secondary schools of the future with respect to the contributions of these mass media relevant to proposed organizational, philosophical, and pedagogical changes.

EdM 511 Programmed Instruction and Teaching Machines 3

A workshop type course that will stress program writing. The course will cover the history and psychology of programmed instruction, recent trends in the field, program evaluation, and programming techniques.

Prerequisite: General Psychology and a recent basic A-V course.

EdM 519 Library Science 2

A course providing essential information in the organization and administration of school libraries. It covers necessary services of the school library, and criteria and procedures for classifying and cataloging instructional materials, both of books and other materials of which the library may serve as the center.

EdM 521 The Production of Non-Projected Materials 3

This course explores the area of teacher-made instructional materials. Techniques of design, lettering, enhancing, mounting, projecting, and evaluating the areas of graphics, and flat pictures are taken up. Methods of displaying, including flannel boards, bulletin boards, peg boards, etc., are explored and evaluated. Teacher-made 3-D materials are also explored.

EdM 523 The Production of Projected Still Materials 3

This production course explores the area of handmade projection materials which can be teacher-made. The major part of this course deals with techniques for producing projectuals for the overhead projector. Special attention is given to the design, lettering, production, and evaluation of diazo type transparencies.

EdM 525 Photography for Teachers 3

Theories and practice in the field of still photography with particular emphasis on the production of photography transparencies, including Polaroid photography. One unit deals with the production of motion pictures.

EdM 533 Television in Education for Teachers 3

The nature of television and the educational use of commercial, educational, and closed-circuit television in the classroom.

EdM 552 History, Philosophy and Psychology of Educational Media 2

A study of the historic development of audio-visual instruction. A consideration of when it was introduced as a tool for education and

the philosophy underlying the teaching-learning process as it relates to the combined use of sight and sound. The theories of psychology which pertain to the effective utilization of audio-visual materials in the process of improving teaching techniques are a considerable part of the course.

Prerequisite: Edu 530 or a recent basic A-V course.

EdM 555 Learning Theories Related to Educational Media 2

Examines the role of perception as it pertains to sensory experience and inner cognative processes in relationship to maturation, goals and drives, types of learning and environment. Seeks to relate psychological processes to learning resources, with emphasis on the newer media.

EdM 560 Organization and Administration of the Audio-Visual Program 2

Includes a study and analysis of the function of the school's education program. The selection and evaluation of materials and equipment, unit costs, problems of developing and maintaining an efficient operation.

EdM 565 Seminar in Instructional Materials 2

A workshop-type course probing the problems in the use of the various instructional media and providing opportunity for investigating the values of community resources, teaching machines, television and other class selected areas of concentration. Emphasis placed on the experimental use of modern media with classroom students with the results discussed and evaluated.

Prerequisite: Edu 530 or a recent basic A-V course.

EdM 590 Internship Program in Educational Media 2

A program in which a candidate would work in a carefully planned variety of roles in a comprehensive regional learning resources center or similar situation, television broadcasting or closed-circuit facility, motion picture production agency, programmed learning development organization, learning resources workshop program, little theatre group, major museum or approved equivalent, under competent university and agency supervision and would be rated by both the cooperating agency and the college.

ELEMENTARY EDUCATION

Art 500 Art Activities in the Elementary School 2

Formulating the art curriculum in the elementary school, organizing materials and procedures in keeping with the contemporary trends in educational philosophy.

EdE 500 Introduction to Graduate Study in Elementary Education 2

A survey course designed to develop the skills and background knowledge needed in graduate study in elementary education. Should be taken early in the program: must be completed before applying for admission to degree candidacy.

EdE 505 The Teacher in the Elementary School 2

An introductory survey course dealing with the role of the elementary teacher and with the content and organization of the elementary curriculum. Designed for those whose undergraduate major was not elementary education. Prerequisite: EdP 551 or the equivalent.

Semester Credits

EdE 510 Foundations of Reading Instruction 3

A basic survey course covering the major areas of the reading field. Consideration is given to: reading readiness, initial reading instruction, word analysis, comprehension, reading skills development, evaluation of reading needs, and implications of the psychological processes involved. Designed for students with no recent undergraduate course in the teaching of reading. Prerequisites: Educational Psychology and Child Development.

EdE 514 Reading in the Content Areas 2

A course in the teaching of reading in the various content fields. Major topics are: the place of reading in the school program, problems in reading curricular materials, methods of meeting needs in different curriculum areas, general and specific reading skills, study methods, critical reading, adjusting to individual differences. Prerequisite: EdE 510 or its equivalent, approved by the instructor.

EdE 516 Analysis, Diagnosis and Correction of Reading Difficulties 2

Treating remedial cases: individual and group procedures for diagnosis and instruction; classification of types of problems; use of different approaches in instruction; writing a diagnosis. Prerequisite: EdE 510 or equivalent approved by the instructor.

EdE 522 Teaching the Communication Skills 2

An introduction to the teaching of oral and written language—content, methods, materials, and organization. The main emphasis in the course is on listening, speaking, and writing. Designed for those whose undergraduate major was not elementary education. Prerequisites: Child Development and Educational Psychology or their equivalent.

EdE 525 Curriculum and Research in Language Arts 2

A survey of the language needs of elementary school children; a review of current research in language arts; and the planning of the curriculum in terms of the language needs and the research findings. Prerequisites: EdE 510 and EdE 522 or their equivalent and teaching in the elementary school.

EdE 530 Social Studies in Elementary Education 2

A basic course in the teaching of social studies, dealing with content, materials, and methods (including the unit approach). Designed for those whose undergraduate major was not elementary education. Prerequisite: EdE 510 or the equivalent.

EdE 532 Social Studies Curriculum and Instruction 2

Curriculum planning; modern teaching methods; instructional materials; recent research and its application in the classroom; use of maps and globes.

Prerequisites: Educational Psychology and EdE 514.

EdE 541 Unit Teaching in the Elementary School 2

An intensive study of the unit method of teaching and the integrated curriculum, with special emphasis on the content fields.

Prerequisite: A recent course in the teaching of science, social studies, or health in the elementary school.

Semester Credits

EdE 543 Creative Expression in the Elementary School 2

A laboratory course designed to help teachers work with children in the creative arts. Emphasis is placed upon the child's needs to discover creative interests and upon the development of skills and refinements of taste needed for rich experience in art, music, and literature.

Prerequisite: Undergraduate major in elementary education, or all required courses under B, Area of Concentration.

EdE 545 The Kindergarten-Primary School Program 2

An advanced course covering kindergarten-primary content, principles, procedures, and materials.

Prerequisite: Teaching experience in the elementary school.

EdE 547 Elementary School Curriculum 2

Examination of current trends and basic problems in the elementary school curriculum; practical, creative projects and investigations dealing with actual teaching situations.

Prerequisites: All required courses in degree program.

EdP 551 Child Development and Behavior I 3

A basic course dealing with child development and behavior from birth to adolescence, with specific application to elementary education. Designed for students with no recent undergraduate course in child development.

Prerequisites: General Psychology and Educational Psychology, or the equivalent.

EdP 553 Child Development and Behavior II 3

A review of principles of growth and development, theories of behavior and personality development, and clues to identifying children with problems. The emphasis is on normal children with problems. Case studies of elementary school children are read and discussed.

Prerequisite: A recent basic course in child development.

EdE 560 Meeting Individual Needs of Children 2

An advanced course concerned with methods and materials for individualizing instruction in the subject and skill areas, and with meeting individual needs in personal adjustment.

Prerequisite: Undergraduate major in elementary education, or all required courses under B, Area of Concentration.

EdC 561 Guidance in the Elementary School 3

Focuses on the positive and preventive aspects of guidance, the roles of the classroom teacher and the guidance counselor, and the cooperative approach in promoting each child's growth.

Prerequisites: Experience and/or course background in elementary education, and a recent basic course in child development.

EdE 563 Evaluation in the Elementary School 2

Emphasizes a diagnostic approach in evaluating the various aspects of children's growth; includes both informal and formal methods of evaluation.

Prerequisite: Undergraduate major in elementary education (including Child Development), or all required courses under B, Area of Concentration.

Semester Credits

EdE 565 Effective Classroom Management 2

Explores the teacher's role in planning and management of those activities which facilitate classroom instruction and learning. Special attention is given to planning and scheduling of learning activities, caring for class routines, insuring availability of instructional materials and the efficient utilization of school time.

Prerequisite: Undergraduate major in elementary education, or all required courses under B, Area of Concentration.

EdE 570 Supervision in the Elementary Classroom 2

Basic concepts and practices involved in working with teachers and student teachers toward the improvement of instruction. Topics to be discussed include: nature and scope of the processes of supervision, professional relationships, conferences, evaluation, and professional growth of teachers. Designed primarily for teachers who have or expect to have some supervisory responsibility; e.g. team leaders, cooperating teachers. Enrollment by permission of the instructor.

Res 500 Methods and Materials of Research 2

An introduction to the basic principles of research in education with attention to types of research, techniques of gathering data, and the application of methods to a specific primary research problem. Students who do not complete their primary research project in this course must take Res 591, Research Seminar in Elementary Education, the following semester.

Res 591 Research Seminar in Elementary Education 1-2

Students who have not completed their primary research projects in Res 500, Methods and Materials in Research, must take this course the following semester to complete research project. The depth of the problem will determine the number of credits to be given. Special attention will be given to format, design and statistics.

Prerequisites: Res 500 and EdF 510.

Res 600 Research Project or Thesis 1-3

In this course the student can complete his thesis under an adviser's guidance. Appropriate credit will be given according to length and difficulty of project. Thesis will usually earn 2-3 credits and research projects will earn 1-2 credits.

GUIDANCE AND COUNSELING

EdF 510 Educational Foundations 3

The history of education; factual history integrated with educational philosophy and thought; the evolution of present-day educational theory and issues from early times.

Res 500 Methods and Materials of Research 2

A study of the following topics: the characteristics of research, use of references, historical research, the survey method, the case study method, experimental laboratory research, classroom research, questionnaires, scaling techniques, psychological tests, sociometrics, and the research report.

Semester Credits

Psy 500 Introductory Statistics for the Behavioral Sciences 2

A study of the following topics: central tendency, variability, standard scores, correlation, probability, sampling, tests of hypotheses, "t" test, chi square, distribution-free statistics, and introduction to analysis of variance.

EdP 551 Child Development and Behavior I 3

A basic course dealing with child development and behavior from birth to adolescence, with specific application to elementary education. Designed for students with no recent undergraduate course in child development.

Prerequisites: General Psychology and Educational Psychology, or the equivalent.

Psy 552 Seminar in Human Development and Behavior (Adolescence) 3

This seminar deals with the problems unique to the adolescent and the young adult against the broad background of human physical, social, and emotional development. Students will be expected to write a research paper on the adolescent or young adult.

EdC 500 Principles and Techniques of Guidance 2

An introductory course tracing the historical development of guidance and the philosophical foundations and determinants of guidance in contemporary elementary and secondary education. A broad over-view of the interdisciplinary foundations of guidance including the relationship of guidance to education and the contributions of the behavorial sciences. An understanding of the individual, his educational, occupational and social adjustments together with the collection and organization of information leading to intelligent analysis, interpretation, and evaluation by teachers and guidance personnel. A study of special services, testing, group and individual guidance and counseling, and other tools of guidance. A look at guidance as a profession, current developments, and trends.

EdC 570 Principles and Techniques in Counseling 2

A study of the different forms of counseling techniques for assisting people with various types of personal-social, vocational, educational and other types of problems. Various directive, nondirective, and ecletic techniques will be studied. The courses will stress the use of counseling tapes, films, observations, and actual supervised practice in counseling. Prerequisites: Three required courses from Group I or approval of advisor.

EdC 562 Organization and Administration of the Guidance Program 2

A survey of current literature in guidance and counseling is made with emphasis on problems focusing on the initiation, organization, staffing, and administration of guidance services. Prerequisite: EdC 500.

EdC 540 Evaluative Methods in Guidance 3

This is a general course geared for people planning on doing guidance at either the elementary or secondary level. Emphasis in this course is placed on intelligence, personality, and special abilities. The course also deals with such testing concepts as reliability, validity, standardization, and other pertinent aspects. Prerequisite: EdC 500.

Semester Credits

EdP 553 Child Development and Behavior II 3

A functional, case-oriented approach to guidance which concentrates on the basic principles and techniques of studying and understanding the individual child. Special emphasis will be on the dynamics of personality development in childhood.

Prerequisite: Psy 551.

EdC 561 Guidance in the Elementary School 3

A course applying principles and theories of developmental psychology and mental hygiene in the prevention and early identification of children's educational, personal, and social problems. Procedures for understanding normal and deviant behavior and the role of clinicians in their application of play therapy; appropriate uses of counseling with parents and children. Some typical problems of the young child such as development of self concept, self-exploration, school phobia, articulation with the secondary school, and other problems will be discussed. The proper use of occupational information in the elementary grades stressing the dignity and worth of vocations, the need for vocational realism, and other factors as bases for later vocational planning and choice. Organization and administration showing the proper roles of the classroom teacher, parents, and the professional guidance counselor will be explored in addition to recent trends, research methods, and current research studies in the field.

Psy 554 Seminar: Adolescent Case Studies 3

A functional, case-oriented approach to guidance which concentrates on the basic principles and techniques of studying and counseling the individual. Various types of case studies will be considered, reasons for the study, identification, and selection of data. How and when to make referrals and follow-up studies will be included. Special emphasis will be on the dynamics of personality and recent research findings.

EdC 556 Occupational, Educational, and Social Information in Guidance 2

A course concerned with procedures for locating, collecting, classifying, analyzing, presenting, using, filing, and evaluating occupational, educational, and social information in guidance. Techniques of job analysis will be stressed as well as the dynamic factors and theory in relation to physical, psychological, educational, social, and economic aspects operating in the process of occupational choice and adjustment. How to assist the socially disadvantaged child and the handicapped person to further his educational and vocational development will be highlighted. In addition the latest trends, research studies, and methods for doing research in the information services will be discussed.

Psy 501 Advanced Statistics for the Behavioral Sciences 2

A study of the following topics: special correlational methods, analysis of variance, and analysis of covariance. Prerequisite: Psy 500.

Soc 531 Social Pathology 3

A study of cultural patterns defined by society as undesireable. Analysis of the role of social science principles relating to the functioning of the family, education, and the state in modern society. Pathological patterns in the economic, educational, and political life resulting in social disorganization are examined.

Semester Credits

EdC 567 Group Guidance 2

This is a treatment of group dynamics as applied to group work with students in educational institutions. It is a study of the interactional processes involved in intra-group situations with special reference to the school. Especial attention is also given to the role of the group leader. An opportunity is afforded to participate in group thinking and behavior and to rate the performance of groups.

EdC 573 Advance Course in Techniques of Counseling 2

Emphasis is on improvement of counseling practice as it relates to professional responsibility and ethics to the counselee, his parents, and to school personnel; analysis of typical cases in counseling from protocol and tape recorded sessions with children and youth on educational matters, personal adjustment problems and career decisions. Open to advanced counseling matriculants with advisor's approval. Prerequisite: Gui 570.

EdC 590 Practicum in Guidance & Counseling 3

Practice counseling under supervision. This will include interviewing for background information: testing: using occupational, educational, and social information; and assisting pupils to solve their problems by means of counseling. Prerequisite: Consent of advisor.

Psy 570 Psychology of the Mentally Atypical Child 2

The status and characteristics of the mentally atypical child. The course is concerned with the mentally superior child as well as the mentally retarded child.

Psy 562 Psychology of Personality 2

A study of the structure and development of personality. The forces that effect personality are considered with their action and interaction. Normal and neurotic personality development are contrasted, and the principles underlying personality testing are explored.

Prerequisite: General Psychology, Educational Psychology, and Human Development.

Psy 563 Mental Hygiene 2

The emphasis in this course will be placed on ways of achieving positive mental health. The dynamics of personality disturbances will be studied, and ways of dealing with such disturbances will be considered with a view to helping people to help themselves.

Psy 580 Individual Psychometric Techniques: Wechsler & Binet Scales 4

This course will highlight the historical development, administration, scoring, and interpretation of the Wechsler Scales.

Prerequisites: Gui 540 or 541 on Evaluative Methods in Guidance. Note: Special permission required in advance of registration. Not for credit in Guidance Program.

Res 591 Research Seminar 1-2

A course involving completion of the research project or thesis. Students' research proposals are presented and discussed.

Semester Credits

EdE 517 Curriculum Problems in Elementary Education 2

Examination of current trends and basic problems in the elementary school curriculum; practical, creative projects and investigations dealing with actual teaching situations.

Prerequisites: Edu 500, Edu 510, undergraduate major in elementary education or all required courses under B, Area of Specialization.

EdS 502 Secondary School Curriculum 2

A broad study of the nature, determining factors, and evolution of the modern secondary school curriculum and of the current principles, practices, and trends in reorganizing and improving the curriculum. Also, a study of the planning, operation, and evaluation of programs of curriculum change in the secondary school.

Hum 500 Humanities 2

This is a composite course composed of three major fields of subject matter: 1. Art and Architecture, 2. Music, 3. Literature. This material is closely correlated to show the relationship of the three fields to each other and to the central theme of a general philosophy connecting these fields of life. The professors teaching this course develop specific material in concert to establish an over-all unity.

Prerequisite: Res 500.

ENGLISH

Eng 501 Modern Techniques for the Teaching of English 2

An intensive investigation into modern techniques in the teaching of language arts, composition, and literature for the secondary school. A thorough study of the application of these techniques and an opportunity for practice in planning and designing units and courses of study.

Eng 502 History of the English Language 2

An examination of the basic influences on the structure and general nature of the English language as it is used today.

Prerequisite: At least one undergraduate course in the field of language structure and usage.

Eng 503 Old English Language and Literature 2

A descriptive study of the grammar, syntax and vocabulary of Old English. Prose readings will include *Apollonius of Tyre* and selections from the gospels, chronicles, and homilies of the period. Poetry readings will include a sampling of elegies, heroic, secular, and religious poetry.

Eng 504 Linguistics for the Elementary School 2

A survey of modern linguistic developments and a study of their application to the elementary school.

Eng 505 Linguistics for the Secondary School 2

A survey of modern linguistic developments and a study of their application by the secondary school teacher of English. An examination of transformational generative concepts.

Semester Credits

Lit 511 English Literary Criticism (1800-1960) 2

A study of the critical dicta which influenced the course of English literature between 1800 and 1960. Special consideration will be given to such major figures as Coleridge, Hazlitt, Ruskin and Arnold.

Prerequisite: At least one undergraduate course in English Literature.

Lit 512 American Literary Criticism (1800-1960) 2

A study of the critical dicta which influenced the course of American literature between 1800 and 1960. Special consideration will be given to Poe, Whitman, Howells, and the New England writers.

Prerequisite: At least one undergraduate course in American literature.

Lit 514 American Literary Movements 2

A detailed analysis of the development of American literature through a study of the major movements. Special emphasis will be placed on the influence of major writers on literary concepts, trends and critical dicta.

Prerequisite: At least one undergraduate course in American literature.

Lit 515 Comparative Literature — Romantic Movements 2

A seminar consisting of lectures, readings, reports, and research papers on the similarities and the differences of Romantic trends and movements of Europe and America, including their international origins, development, and influence on subsequent literature. Emphasis is laid on influences. Representative and illustrative selections are read in English translations. Knowledge of foreign languages is not required.

Lit 516 Major 20th Century American Poets 2

Readings in Robinson, Frost, Found, Eliot, Crane, Stevens, Cummings, Williams and others. Critical standards and theories of poetry from the beginning of the century to the present.

Lit 517 Literary Spokesmen for American Ideas 2

An intensive study of American writers who have depicted, explained and interpreted major intellectual currents in American culture; an analysis of modern writers who deal with problems of conformity, alienation, racial responsibility, and a re-evaluation of our American tradition.

Lit 521 English Literature to Chaucer 2

A study of certain significant figures in English literature beginning with the Old English Period and closing with the Pearl Poet. Emphasis upon origins, trends and influences. Reading, reports, research.

Lit 522 Chaucer 2

A study of the life and works of Chaucer; readings, reports, and class discussions of major works and theories of origin and influence.

Lit 523 Eighteenth Century Novel 2

The significant master works of prose fiction in England from Defoe to the end of the century; development of types of the novel; the theories of structure, techniques of characterization, and the philosophies of the major authors.

Semester Credits

Lit 524 British and Continental Short Story 2

A consideration of the short-story form especially as concerned with its origin, development, and current trends. Emphasis upon the influences of German, French, and Russian writers upon the British form.

Lit 525 Biography 2

A survey of biographical writings from Plutarch to the present. Emphasis upon origins and trends and major figures such as Boswell and Johnson.

Lit 526 Tudor Poetry and Prose 2

A study of the nondramatic literature in England from Wyatt to Jonson. Special emphasis is placed upon the interplay of exterior and interior influences in developing England's Golden Age.

Lit 527 Stuart Literature to the Commonwealth 2

An analysis of the growth of English literature from the accession of James I to 1650. Special consideration to the metaphysical school, the sons of Ben, and the political writers.

Lit 528 Milton 2

Detailed study of the work of John Milton, including major and minor poems and some of the prose.

Lit 529 Victorian Prose 2

A study of the prose writers of the last half of the nineteenth century with emphasis upon the major writers.

Lit 530 Victorian Poetry 2

A study of the poets of the last half of the nineteenth century with emphasis upon Tennyson, Browning, and Arnold. Literary movements of the time considered.

Lit 531 Shakespeare's Predecessors in Drama 2

A course designed to trace the development of the drama from classical antiquity to the time of Shakespeare. The purpose is to consider the nature, structure, and other major aspects of the principal types of drama.

Lit 532 Advanced Shakespeare 2

Discussion with readings, reports, and original research on selected plays; study of origins, development, and influence.

Lit 533 Romantic Prose and Poetry 2

A study of the poets of the early nineteenth century with emphasis upon Wordsworth, Coleridge, Keats, Shelley, Byron. Literary movements of the time considered.

Lit 534 Twain and James 2

Detailed study of the works of Mark Twain and Henry James.

Prerequisite: At least one undergraduate course in American Literature.

Semester Credits

Lit 535 Twentieth Century American Writers 2

A study of the major writers and literary movements of the period, 1900 to 1960.

Prerequisite: At least one undergraduate course in American literature.

Lit 536 Twentieth Century Drama 2

A survey of principal British and American playwrights from Shaw to Arden and Miller, including an analysis of important plays and trends.

Lit 537 Emerson and Thoreau 2

Detailed study of the works of Emerson and Thoreau and of writers associated with them.

Lit 538 Hawthorne and Melville 2

Detailed study of the works of Hawthorne and Melville.
Prerequisite: At least one undergraduate course in American literature.

Lit 539 Eighteenth Century Poetry and Prose 2

A survey of the literature of the era, with particular emphasis on aesthetic theory and the evolution of poetic technique. All major writers are included.

Lit 540 Restoration and Eighteenth Century Drama 2

A history of the British drama from the reopening of the theatres to Sheridan. Major playwrights are considered, and a close study of theatre history in undertaken.

Lit 541 Greek and Roman Literature in Translation 2

A study of the major dramatic, epic, and lyric works from the classical period with influences upon Anglo-American literature from the sixteenth to twentieth centuries.

Lit 542 Spenser 2

A study of Spenser's poetic work with emphasis on *The Faerie Queene* and its influence.

Lit 550 Literature for the Elementary School 2

A course designed to acquaint the student with the content and approach of the literature program in the elementary school. Although this course is designed primarily for elementary school teachers, it can also be pursued profitably by administrators, curriculum specialists and others interested in the elementary school level.

Lit 551 Literature for the Secondary School 2

A survey of the literature content of secondary school curricula. An examination of the literary interests of the secondary student and the relation of these interests to the curriculum. The works of major writers who appeal to the teen-age student will be discussed.

Eng 543 Advanced Problems in Public Speaking 2

Intensive study of parliamentary procedures for both large and small groups with special emphasis on the problems of the chairman, committee members, conventions, etc.; leadership and participation in group discussion on current public questions; speech making. Special research project is required.

Semester Credits

Eng 544 Problems of Speech Correction 2

Discussion, lectures, and demonstrations on the rehabilitation of stammerers, of persons with cerebral palsy, cleft palate, hearing loss, and aphasia. Special emphasis on diagnosis, problems, integration with medical and training centers, treatment, and adjustment with society.

Eng 590 Seminar in English 1 or 2

To be taken at the time thesis is developed. Admission with approval of department, also, for study of a special problem.

ThA 536 Television: Equipment, Planning and Production I 3

The basic concepts of television planning and production as related to the non-dramatic format of production. The student uses the tool of the telecaster, becomes familiar with the anatomy of the studio and plans a series of instructional lessons for use in the classroom. (Lecturer and Laboratory).

(Fall of even years.)

ThA 537 Television: Equipment, Planning and Production II 3

Continuation and development of skills and knowledge in use of television equipment, the application of the arts of the theatre and the production of the dramatic television program. Each student plans a program series for use in the classroom. (Lecture and Laboratory).

Prerequisite: Tha 536 Television I.

(Fall of odd years.)

ThA 538 Television: Production of Graphic Arts 3

Gives the student practical experience in the production of visual and graphic materials necessary in television. Workshop sessions where graphics are prepared and presented by television, followed with evaluation by the group.

FOREIGN LANGUAGES

Group I — Professional Education

Lan 500 Methods and Materials of Research 2

A study of the techniques of research in Foreign Language Education, including location, evaluation, and interpretation of data. Attention is given to correctness of form in reporting data.

Lan 501 Linguistics 2

An introduction to the study of language as a science. A history of languages in general, with particular attention to the Indo-European branch. The application of the science of linguistics to the teaching of languages.

Lan 502 FLES 2

A study of the problems involved in the teaching of foreign languages in the elementary school. Teaching materials are surveyed and attention is given to special techniques required for the teaching of a foreign language at the elementary school level. Observation of actual elementary school foreign language classes.

Semester Credits

Lan 503 Techniques of Language Teaching 2

An intensive survey and critical analysis of the texts and other materials used in foreign language teaching. A study of the latest approved methods of teaching foreign languages at the secondary level. Observation of secondary level foreign language classes being taught.

Lan 504 The Language Laboratory 2

A study of the latest approved techniques for the use of the language laboratory in foreign language teaching. A survey and analysis of commercial materials available for use in the language laboratory. Practice in composing laboratory drills and in the preparation and voicing of scripts.

Group II — FRENCH

Fre 511 Romance Philology (French) 3

A study of the historical development of French phonology and morphology from their earliest beginnings to the present. A survey of the chief characteristics of the various Old French dialects, based on an analysis of Old French Texts.

Fre 512 Explication de Texte 3

A study of the French technique of textual and stylistic analysis known as "explication de texte". Practice in applying these techniques is undertaken through a series of analyses of the works of selected French writers.

Fre 513 Phonetics 3

An intensive study of the sounds of French through the application of the phonetic alphabet with a view to developing an absolute mastery of the correct pronunciation and intonation of the French language. Laboratory drill with the latest recordings by leading phoneticians.

Fre 514 Advanced Grammar and Composition 3

A conceptial approach to the study of French grammar. An intensive analysis of the various principles of French grammar and syntax. An evaluation of the changes which have occurred in French grammar and usage in recent decades.

Fre 520 Rabelias and Montaigne 3

A study of the works of the two major prose writers of the French Renaissance. A survey of the major critical works which deal with their life and writings.

Fre 521 Moliere 3

An intensive analysis of the plays of Moliere. A study of the history of comedy in France, and of the life and times of Moliere the man.

Fre 522 Voltaire and Rousseau 3

A study of the major works of Voltaire and Rousseau and a critical and analytical comparison of their respective philosophical points of view. Their impact on the character of Western civilization is also analyzed.

Semester Credits

Fre 523 Proust 3

The reading and intensive analysis of a *A la Recherche du Temps perdu.* A survey of Proustian criticism is undertaken along with a study of Proust the man. The place of Proust in the history of the novel is evaluated.

Fre 524 Gide 3

A study of Gide's life and writings. An attempt is made to synthesize Gide's philosophy as an artist and as a human being. A discussion is carried on of Gide's importance in Freench literature of the first half of the 20th Century.

Fre 530 French Classical Tragedy 3

The tragedies of Corneille and Racine are read and analyzed. The history of tragedy in France is studied to give the student an insight into the forces which culminated in the work of the great classical dramatists.

Fre 531 The French Novel (to the end of the 19th Century) 3

A history of the novel in France, with particular emphasis on the works of the major French novelists of the nineteenth century: Hugo, Stendahl, Balzac, Flaubert, and Zola.

Fre 532 The 20th Century French Novel 3

A study of the French novel in the Twentieth century and of the various philosophical, and social and aesthetic doctrines which have helped to shape it. An analysis of the masterpieces of the outstanding novelists of the century. (Excluding Proust and Gide, who are treated in a separate course.)

Fre 533 Lyric Poetry 3

A study of the evolution of French lyric poetry with particular stress on the 19th century. An analysis of the forms, techniques and rules of French versification. A survey of French poetic doctrine as it evolved through the centuries.

Fre 534 The Contemperary French Theater 3

The principal dramatic works of the 20th century are studied and analyzed against the history of the development of the theater in France. The latest techniques and innovations are analyzed and an assessment of their importance and impact on the modern theater is attempted.

Group III — GERMAN

Ger 511 German Philology 3

A study of the development of German phonology and morphology from their earliest beginnings to the present. A survey of the chief characteristics of Gothic, Old Saxon and Old High German will be introduced. Analysis of the language of the Low German Heliand and the earliest High German documents will be given.

Ger 512 German Civilization 3

This course will deal with the social structure of Germany, the evolution of its institutions, and its achievements in the various fields of art.

Semester Credits

Ger 513 Phonetics 3

A study of the sounds, forms, and structure of modern standard German, using recorded materials and selected texts.

Ger 514 Advanced Grammar and Composition 3

Study of stylistic resources of modern German, based on reading and analysis of selected texts. Discussion, oral and written drill.

Ger 520 The Age of Goethe 3

A thorough study of the Golden Age of German literature. German Enlightenment, Storm and Stress and Classicism will be studied. Literary masterpieces will be read and analyzed. Special attention will be given to English influences, especially Shakespeare.

Ger 521 Goethe 3

A study of Goethe's works and his development toward classicism. A survey of the major critical works which deal with his life and writings.

Ger 522 Schiller 3

A thorough study of Schiller's dramatic works and his development toward classicism. A survey of the major critical works which deal with his life and writings.

Ger 530 German Reformation, Baroque and Pseudo-Classicism 3

Literary trends in the period of Reformation and Counter Reformation will be studied. The influence of French classicism upon German Literature of the late 17th and early 18th century will be analyzed and discussed.

Ger 531 German Literature of the 19th Century 3

Romanticism, poet realism, naturalism with special emphasis on the great dramatic and lyric poets of the period.

Ger 532 German Drama of the 19th and 20th Centuries 3

A study of the works of the major dramatists of the 19th and 20th Centuries. Special attention will be given to the dramatists of naturalism and expressionism.

Ger 533 Middle High German Literature 3

The study of Middle High German literature from 1050-1300 with emphasis on the principal representatives of the Popular and Court Epic and the lyric poetry of the Golden Age.

Ger 540 The German Short Story 3

A study of the German Short Story from Romanticism to the present. German Feuilleton will be included. Special attention will be given to Thomas Mann, Kafka and the post-second World War Writers.

Ger 541 Modern German Poetry 3

A study of modern German poetry with emphasis on Stefan George and his circle, and Rainer Maria Rilke.

Semester Credits

Ger 542 Modern German Novel 3

The following trends of the modern German novel will be studied: Naturalism, Impressionism, Expressionism and the "New Matter-of Factness" with emphasis on Hesse, Thomas Mann, Doeblin and Kafka.

Group IV — SPANISH

Spa 510 Advanced Spanish Phonetics 3

A theoretical and practical approach to phonology, phonetics and phonetics transcription. Regionalistic and dialectal variations are also studied with Tomas Navarro Tomas' standard text: *Manual de pronunciacion espanola.*

Spa 511 Advanced Spanish Grammar and Stylistics 3

An informal rapid review of Spanish grammar with emphasis on related problems fundamental to the American classroom. Exercises will include idiomatic expression, various levels of style and translation.

Spa 512 Spanish Civilization 3

A study of the major philosophical and artistic contributions of the Hispanic world to the development of Western civilization. An analysis of the philosophical and psychological aspects of the development of Spain's social and economic institutions, and the character of her people as reflected in the arts.

Spa 520 Cervantes 3

Detailed study and analysis of the life and works of Miguel Cervantes Saavedra: the *Novelas ejemplares, Ocho Comedias y oche entremeses, La Numancia, La Galatea,* all of which lead to a careful study of the meaning, philosophy and influence of *Don Quixote.*

Spa 521 Lope de Vega 3

The Spanish comedia is viewed as an expression of the Spanish people with emphasis upon the popular and national elements of this theater. Lope de Vega is studied as the chief innovator and leading figure of the first half of the Golden Age.

Spa 522 Calderon 3

A study of the contribution of Calderon, the leading figure of the second half of Spanish Golden Age "comedia." A detailed analysis of his *autos sacramentales* is followed by a study of the Baroque, and the philosophical and dramatic qualities of his theater.

Spa 530 Medieval Spanish Literature 3

A study of the *mester de juglaria* and the *Poema del Cid;* a view of early related epics and the *mester de clerecia* leads to an analysis of Spain's early historical chronicles. The beginnings of the early Spanish theater are traced in the framework of this background.

Spa 531 Spanish Renaissance and Humanism 3

Consideration of the leading proponents of the humanistic spirit in Spain; Nebrija, Erasmus, the brothers Valdes, the Spanish Inquisition, the Renaissance theater and the novel, Juan del Encina, Torres Naharro and *la Celestina.*

Semester Credits

Spa 532 Nineteenth Century Spanish Literature 3

The development of the philosophy and spirit of the Spanish romanticists and *costumbristas,* Duque de Rivas, Espronceda, Gomez de Avellaneda, Becquer, Larra and Mesonero, Romanos; the drama and novel as represented by; Pardo Bazan, Palacio Valdes, Clarin and Galdos.

Spa 533 The Generation of 1898 3

An overview of the revitalizing forces which took hold in the late nineteenth century and a study of the works of: Unamuno, Azorin, Menendez Pidal, Pio Baroja, Valle Inclan, Benavente, Martinez Sierra and Reuben Dario.

Spa 540 The Picaresque Novel 3

The picaresque novel as a truly indigenous creation of Spain; *Lazarillo de Tormes, Guzman de Alfarache, Vida del Buscon;* the picaresque novel as a literary tradition in Spain and in other literary traditions.

Spa 541 The Modern Spanish Theater 3

The "Ibsenite" and social dramas of the late nineteenth century represented by: Lopez de Ayala, Jose Echegaray and Galdos; the transition period headed by Martinez Sierra and the Brothers Quintero will lead to Spain's modernistic drama headed by Federico Garcia Lorca and Alejandro Casona.

Spa 542 Lyric Poetry 3

A study of the evolution of Spanish lyric poetry with special emphasis on early forms, Renaissance italianate forms, and the blossoming of lyric poetry in the nineteenth and twentieth centuries.

Spa 550 The Spanish American Novel 3

The development of the novel in Latin America is analyzed and discussed from the point of view of the major characteristics of each period—the colonial period, the period of independence, the romantic period—and realism, modernism, *criollismo,* and naturalism.

Group V — LATIN

Lat 511 Comparative Grammar of Greek and Latin 3

A study of the relation of Greek to Latin within the Indo-European family of languages. A survey of the external histories of Greek and Latin. A study of Greek and Latin phonology and morphology with reference to principles of syntax.

Lat 512 History of the Latin Language 3

A study of the development of the Latin language from the time of the earliest inscriptions to the 9th century A. D., with some consideration of the prehistoric linguistic and archeological background of the language and people of Rome.

Lat 513 Italic Dialects 3

The languages of the Italic branch of the Indo-European family of languages, exclusive of Latin; Oscan and Umbrian grammar. A study of Italic inscriptions. A brief survey of other dialects.

Semester Credits

Lat 514 Advanced Latin Prose Composition and Translation 3

An intensive review of Latin syntax with translation of English passages into Latin and of Latin passages into English.

Lat 520 Advanced Course in the Works of Julius Caesar 3

A study on the Alexandrine, African, Spanish, Gallic, and Civil Wars, with reference to their political background.

Lat 521 Cicero's Philosophical Essays 3

Studies in the *Somnium Scipionis, Tusculan Disputations, De Natura Deorum,* and *De Officiis,* with reference to Cicero's political theory and practice.

Lat 525 Latin Metre and Verse 3

A study of the formal structure and development of Latin verse from its beginnings to the twentieth century. Illustrative readings in early, classical, medieval, and modern Latin poetry.

Lat 526 Greek and Latin Epic 3

A study in the development of the Greek epic from Homer to Apollonius of Rhodes and of the development of the Latin epic from Naevius to Virgil. Readings of portions of the classical epics.

Lat 527 Roman Historiography 3

Reading and study of selections from the writings of Sallust, Caesar, Livy, Tacitus, and Suetonius. Studies in the origins, development, and influence of Roman historiography.

Lat 528 Roman Satire 3

Studies in the history of Roman satire and the development of Lucilian Satire. A comparative study of the satires of Horace, Persius, and Juvenal.

Lat 529 The Latin Novel 3

A study of the emergence and development of the Latin Novel. Readings in Petronius, *Cana Trimalchionist;* Seneca *Apocolocyntosis:* the Pompeian Inscriptions; and Apuleius, *Metamorphoses.*

Lat 530 Medieval Latin Literature 3

Latin poetry and prose from the 4th to the 17th centuries, with emphasis on the acquisition of a good reading knowledge of medieval Latin in different periods and of varying styles.

Lat 531 Latin Epigraphy 3

A study of Latin inscriptions from the earliest period to the 8th century A. D. A study illustrative of the development of the Latin languages.

Lat 532 Roman Archaeology 3

A study of the relics of Roman civilization and culture in Italy, Africa, Spain, France, and Britain.

Lat 533 Historical Numismatics 3

A study of Greek, Roman, and Near Eastern coins and medals as contemporary and authentic documents illustrative of otherwise unascertainable facts of Mediterranean history.

Semester Credits

Lat 534 Geography of Ancient Greece and Italy 3

Studies in the geography of ancient Greece and Italy. Readings in ancient geographers, including Claudus Ptolemy and Strabo, with particular attention to the latter's method.

GEOGRAPHY

Geo 500 Modern Techniques of Teaching Geography 3

A study of present day techniques in teaching Geography with emphasis on organization, planning, and presentation. It includes a survey of the tools of geography and their applications, library and curriculum materials, modern textbooks, and methods of evaluation. Students will receive experience in presenting geography lessons and evaluating the experimental methods used in the course.

Geo 501 Geomorphology 3

The course deals with the classification of major and minor surface features of the earth and their origins. The structures of land forms and the earth processes which brought them about are explained with special references to their relationships to mining, engineering, and other human activities. The interpreting of land forms from topographic maps is an important part of the course.

Geo 502 Regional Physiography of North America 3

A regional analysis of the surface configuration of the North American continent. Emphasis will be placed on the geographical interpretation of those aspects of the terrain especially significant in affecting utility of the land.

Prerequisite: Physiography, Geology or Geomorphology.

Geo 503 General Climatology 3

The course deals with the meteorological factors influencing the climates of the world and the general patterns of world climates. Climatological data are examined in reference to natural situations and climatic classification. A complete survey of the world climates is presented.

Geo 504 Regional Climatology of the Continents 3

A descriptive and explanatory analysis of the characteristics of the climates of each continent. Emphasis is on deviations from the normal world pattern as they are developed through climatic controls associated with the various continents.

Geo 505 Advanced Cartography 3

An advanced study of cartographic methods including laboratory work in advanced construction techniques. Map construction, graphic representation, land form drawing, lettering and color reproduction are included in the work.

Prerequisite: Geography 303 or consent of department head.

Geo 506 Advanced Physical Geography for Teachers 3

This is a study of basic physical geography with emphasis on a background for elementary teachers. The fundamental concepts in earth-sun relationships, land masses, landforms, oceans, weather, and climate and our natural resources are explained as elements and controls in the general geography of the earth. The basic concepts of physical geography are studied in relation to the total geographic concept.

Geo 507 Advanced Map Interpretation 3

This course aims to provide the student with an understanding of the properties of maps such as scale, projection, coordinates, legend, and other marginal information. Special emphasis will be directed toward the reading and interpretation of large-scale topographic maps. This includes the recognition of natural features and land uses. The course also includes the introduction to statistical maps showing amount, value, or density distribution using dots, lines, and colors.

Geo 520 Problems of Economic Geography 3

A study of economic situations in our country and the world, with emphasis on the major problems of production, surplus, marketing, conflicting national policies and special problem areas. Also the problems in gathering, presenting and comparing economic data will be analyzed.

Geo 521 World Economic Patterns 3

The course will consider world resource regions and patterns of productivity. Part of the course will deal with changing patterns in world trade. New economic alignments, such as the Common Market groups of Western Europe will be discussed. The effect of newly discovered raw material resources, and the impact of increased industrialization in previously non-industrialized nations and regions will be analyzed. The problems associated with the economic development of backward areas will also be studied.

Geo 522 Agricultural Geography 3

A survey of the distribution, variations and significance of the major types of agriculture in the world. Analysis of major world crops and their distribution, with emphasis on relationships to climate, soils, terrain and economic factors will be developed.

Geo 523 Advanced Conservation of Natural Resources 3-6

An economic and geographical appraisal of resource conservation in the United States, including factors of resource management in relation to regional and national planning. The summer offering of this course may be organized as an advanced conservation workshop with two separate divisions:

Course I Conservation of U.S. Resources 3

This course presents the basic problems and practices associated with the general area of resource conservation.

Course II Problems and Research in Resource Management 3

This phase of conservation study is for the more advanced students. The study includes problems of land, air and water resource planning. The procedures include lectures by specialists, field investigation, library research and consultations, followed by student symposia. Admission to the course is by approval of the department or the course director.

Geo 524 Geography of Population 2

A study of the characteristics and distribution of ethnic groups, and the geographic problems that arise from densities of population involving ethnic groups. The course will also include an examination of the physical, social, and economic population characteristics of the

ethnic groups. Current and projected world patterns of population distribution will be presented.

Geo 525 Geography of Regional Planning 3

The course will consider the current levels of areal development, first on a world scale and then on a national, state, and local scale. The course includes an examination of the factors of space, resources, and natural situation that apply to regional planning. Special emphasis will be given to local or near-by planning projects.

Geo 526 Urban Geography 3

The course will consider the rise and growth of cities, the economic base of cities, the classification of cities, cities as central places, and the size and spacing of cities. Attention will also be given to the internal structure of cities and the urban-rural fringe of cities.

Geo 527 Political and Global Concepts in Geography 3

A study of the development and trends of present world political patterns include spatial, economic, and strategic factors on a global scale. Analysis of the physical environment, the distribution of man on the earth, world resource distribution, and other geographic relationships, affecting global concepts in geography are important aspects of the course.

Geo 529 Geographic Influences in World History 3

Geographic influences in selected aspects of world history are developed. Geographic factors in settlement and expansion, the development of raw materials and major trade areas and routes analyzed. Study is made of changes in the use of land and natural resources in significant periods of world history and the geographic factors related to these changes.

Geo 540 Geography of the United States 3

The course includes a study of the physical geography of the country as a basis for an analysis of its geographic regions. Special emphasis is placed on natural resource production, transportation factors, general economic patterns and urban and industrial concentrations.

Geo 541 Geography of the United States in its World Relations 3

An analysis of the interdependence of our country in the world of nations. Changing patterns within the United States will be analyzed in relation to economic, strategic and political developments in other parts of the world.

Prerequisite: World Geography.

Geo 542 Geography of Canada 3

A study in the physical and cultural regionalism of Canada. The course will survey the natural resources and patterns of human occupance including agriculture, industry and transportation.

Geo 543 Geography of Mexico and Middle America 3

A regional geography of Mexico, Central America and the West Indies. The course will survey a development of political divisions and their present day functions in relation to their geographic conditions. Special emphasis will be placed on the geographic analysis of the part these countries play in Inter-American affairs.

Semester Credits

Geo 544 Geography of South America 3

A regional geography of South America, including an analysis of the physical base, settlement, agriculture, mining and manufacturing. Emphasis will be placed on Inter-American relations of these countries.

Geo 545 Geography of Europe (excluding the U.S.S.R.) 3

An advanced study of the geographic factors in the economic, social and political progress of the European nations. Emphasis will be put on current major problems of the continent in light of their geographic background. Consideration will be given to some geopolitical problems.

Geo 546 Geography of the Soviet Union 3

The course includes both European and Asiatic U.S.S.R. and the satellite nations. The elements of the geographic environment and the major regional divisions will be studied in relation to the resource base and the economic and political aims of the country. Emphasis will be placed on the positive and negative geographic factors in relation to the strength and weakness of U.S.S.R. as a major world power.

Geo 547 Geography of Asia (excluding the U.S.S.R.) 3

An over-all survey of Asia including a study of physical and geographic regions, with concentrations on the monsoon realm, the Far East and Southwest Asia. The resources and major activities of the people in regions of densest population and greatest economic and strategic importance will be stressed.

Geo 549 Geography of Africa 3

A study of the physical structure and resources of the continent in light of competing and economic forces which have helped shape the human geography of the continent. The impact of alien cultures, with particular emphasis on Islamic and Western influences in creating geographic regions will be considered. Africa's strategic importance in the present and future world picture will be noted.

Geo 580 Seminar in Geography in Education 2

An advanced course on geography in the present day American schools. The work is concerned with meeting the needs of those expecting to teach geography. Techniques of teaching geography in the various forms in which it is currently presented in relation to the curriculum are emphasized.

Geo 581 Seminar in Modern Philosophy of Geography 2

A review of modern geographic thought with emphasis on the contribution of American geographers. Points of view on environmentalism, regionalism and other doctrines that find expression in geographic literature will be examined.

Geo 582 Seminar in Geographical Writing and Literature 2

This course surveys the geographic literature of various periods in the development of geographic thought and research, with special emphasis on present day writings. Students will examine and discuss the works of many important geographers and receive experience in original writing, statistical analysis and research reporting.

Semester Credits

Geo 584 Seminar in Geographic Research 2

The course will survey the various sources of geographic information and the methods of handling such materials for compiling into reports and geographic writing. Bibliographic aids and archival sources of geographical material will be used in preparation of research reports. Students will be required to prepare either an outline for a Thesis or a Research Report.

Geo 585 Geography Field Methods 3

An advanced field course in geography to include both urban and land use studies. Field methods, mapping and assembling of field study findings into geographical reports will be part of the course.

Geo 586 Area Field Studies (I, II, & III) 3 to 9

A specific geographic region or area is selected for studying in the field. This includes various parts of the United States and foreign countries. Methods in field study, mapping, and assembling of field study findings into geographical reports are included in the procedures. Costs will vary with each course offering. A student may take several of these field courses.

Geo 587 Geography Workshop for Teachers 3

A combination of research, field work, teaching procedures and group studies on one or several phases of geography will be organized and carried out on a workshop basis.

Geo 600 Research Report 1-2

The research report is aimed at giving the student practice in research techniques and methods of reporting the results. These research papers are more limited in scope than the Thesis and may not include a complete analysis or final conclusion of the research problem. A student may do several research reports.

Geo 610 Thesis 3

A thesis is built around a research problem in which the student develops a theory or proposition and investigates the available information on the subject. Approved research techniques and scientific analysis of findings must lead to logical conclusions and arguments in support of the original proposition. The research topic may represent a new problem or additional findings and conclusions to an earlier investigation report.

HEALTH AND PHYSICAL EDUCATION

PeD 502 Elementary Physical Education Workshop 2

A complete orientation for the teaching of elementary physical education. Principles and practices will be presented and developed. A variety of appropriate activities will be considered from the standpoint of their use at various grade levels.

PeD 510 School and Community Recreation 3

A study of community recreation with special emphasis on the role of the school in relation to the total program.

Semester Credits

PeD 512 Outdoor Education Workshop 2

A study of principles, procedures and skills necessary to conduct outdoor education programs. The approach will consist of seminars, lectures, discussions, field trips, and practical participation in outdoor education skills.

PeD 520 Advanced Coaching 3

A study of the principles, procedures, and skills necessary to conduct an outdoor education program. Students will participate in and serve as leaders in a college sponsored outdoor educational program.

PeD 521 Administrative Supervision of Interschool and Intramural Athletics 3

The organization and administration of athletic and intramural programs including the theory principles, and objectives at various levels of competitions. Job specifications of athletic and intramural directors and the delegation and assumptions of responsibilities will be given detailed consideration. Practical operating policies and procedures for athletic administrators will serve as a guide for this course.

PeD 530 Scientific Bases for Physical Education 3

A course devoted to the study and analysis of scientific data related to the selection, value, and techniques of instruction in physical education activities. Major emphasis will be on the basic scientific approaches to motor learning and the development of skill patterns.

Prerequisites: Anatomy and Physiology I and II, and Applied Physiology or their equivalents.

PeD 531 Adapted Physical Education 3

A course designed to help the physical educator provide a meaningful program of adapted physical education in the public school. Emphasis will be placed on the positive application of activities to benefit the child with a temporary or a permanent disability. There will be opportunity to explore the modification of activities to assure participation as well as the selection of specific exercise to foster correction of remedial conditions.

PeD 534 Modern Principles of Athletic Training 2

A combined lecture and laboratory course designed for the practicing physical educator and/or coach. Emphasis will be placed on injuries that occur in classes, at practice sessions, and in game situations. In addition to the didactic work, students will receive instruction and practice in preventive taping and wrapping, and immediate first aid procedures. Good porfessional and/or ethical relations with the medical profession will be stressed throughout the course.

HEd 540 School Health Problems 3

A course designed as in-service training to study the current school health problems by using the Case Technique Method. A wide variety of materials, methods, and resources will be utilized in working on these problems.

Prerequisites: One year's teaching experience or equivalent.

HEd 541 School-Community Health Education Workshop 3

A study of common problems in the home, community, and school health education areas. The five-point program follows: to provide

in-service training in health education; to stimulate and promote an effective follow-up program in health services; to coordinate the efforts of allied health agencies; to stimulate and promote interest in local health units; and to develop an awareness of the place of mental health in the total health program of the home-school-community.

PeD 550 Historical and Philosophical Bases for Health, Physical Education and Recreation 3

The basic approach to health, physical education, and recreation through the study of past and contemporary philosophies, principles, objectives, and trends.

PeD 551 Seminar: Professional Literature in Health, Physical Education and Recreation 3

A critical review of the current professional literature in both the major and related fields. Emphasis will center upon a broad review in terms of its application to teaching and research.

PeD 560 Contemporary Problems in Health, Physical Education and Recreation 3

An overview of the problems in teaching health, physical education, and recreation with specific relationship to in-service aspects. Emphasis will be placed on the factors and variables which influence solutions to these problems.

PeD 561 Statistics in Health and Physical Education 3

The study of statistical and evaluative procedures and their application to the field of health, physical education and recreation.

PeD 562 Administrative and Supervisory Practices in Health, Physical Education and Recreation 3

The nature and extent of the positions of directors or supervisors of health, physical education and recreation. The job specifications will be defined and operational principles and procedures will be developed.

PeD 563 Scientific Measurement and Instrumentation 2

Experience in measurement involving operation of laboratory equipment for research in physical education.

PeD 564 The Biodynamics of Human Performance 3

A study of that branch of physiology which relates to active, vital phenomena of the organism. The course emphasis will be on scientific findings concerning the study of human performance, especially under stress and accompanying physiological adjustments. It will include metabolism, nutrition and diet, cost of work, fatigue and rest, overweight, dehydration, environmental and climatic adaptation and ergogenics.

PeD 570 Curriculum Developments in Health and Physical Education 3

Contemporary trends in health and physical education curricula at the elementary, secondary and college levels. Extensive surveys, reports, and analysis of curriculum practices will be applied to the construction of health and physical education programs.

Semester Credits

PeD 571 Comparative Physical Education—Contemporary Foreign Programs 2

A comparative study of contemporary physical education programs in countries outside the United States. Particular emphasis will be placed upon current philosophy, principles and practices. Broad based resources in complete form and/or abstracts in both the foreign language and translations will be used. Available audio-visual resources will be reviewed. (When this course is given in a Foreign Field Trip, it will carry from 3 to 6 credits.)

PeD 572 The Child and Physical Education 3

To explore the potential contributions of P.E. to the physical, social, emotional, and intellectual growth and developmental needs and interests of children. In addition, ways and means of studying and evaluating the influence of the activities (games, rhythmics, and self-testing activities) on the various aspects of growth and development will be considered.

PeD 580 Contemporary Practices in Safety Education 3

A course designed to evaluate and interpret research studies and practices affecting the teaching of safety education in schools and colleges.

PeD 590 Methods and Materials of Research 2

A study of the techniques of research in education with specific application to the field of health, physical education and recreation. Prerequisite: A course in Measurement and Evaluation in Health, Physical Education and Recreation.

PeD 591 Non-Thesis Seminar A 1

This course is designed for the Non-Thesis candidate. The student will select a research problem, review the literature, set-up procedures, collect data relative to the problem he selects. During Seminar A he will be expected to complete the first three chapters of the Research Report. He will continue to register for this course each term until this requirement is met. As soon as Seminar A is completed, the student must register for Seminar B.

PeD 592 Non-Thesis Seminar B 1

This course is designed for the Non-Thesis candidate and should be registered for immediately following completion of Seminar A. The student will be expected to complete the Research Report during Seminar B. The student will continue to register for this course each term until this requirement is met.

PeD 593 Thesis Seminar 2

This course is designed for the Thesis candidate. The student will select a topic, review the literature, set-up the procedures, and prepare a proposal that is acceptable to his thesis committee. The student will continue to register for this course until the requirements have been met. As soon as this requirement is met, the student will register for Thesis.

PeD 610 Thesis 3

Working with a Thesis advisor and/or a Thesis Committee, the student will complete the Thesis. The student will continue to register for this course each term until the thesis has been accepted.

Semester Credits

Mat 500 Methods and Materials of Research in Mathematics Education 2

A course involving a study of the techniques of research in mathematics education. Included are an analysis of the various types of research, selection of a problem, selection of appropriate procedures and the formulation of a plan of investigation and report.

Mat 501 Fundamental Concepts of Mathematics I 3

A course for the elementary teacher. It includes development of our number system, the base of a number system, and the role of the various types of numbers and operations in mathematics. The course stresses the meanings and understandings of the mathematics related to the elementary program.

Mat 502 Fundamental Concepts of Mathematics II 3

A continuation of Mat 501. Emphasis is placed upon the structure of the real number system. Basic concepts of geometry are also included for study.

Prerequisite: Mat 501.

Mat 503 History of Mathematics 3

A course tracing the development of mathematics from the prehistoric to the present. This course involves a study of various areas in mathematics as well as the men responsible for the development.

Mat 505 Theory of Sets 3

A course in set theory and the foundations of mathematics. Included for study are sets, subsets, set operations, algebra of sets, equivalence relations and partitions, sets of numbers, cardinal numbers, Theorems of Cantor and Schroeder-Bernstein, continuum hypothesis, ordering in sets, and ordinal numbers.

Mat 511 Foundations of Algebra 3

A course in basic concepts in algebra. Beginning with the nature and structure of the number system, the course also includes sets and their use in algebra, mathematical systems in general, and an introduction to abstract algebra.

Mat 512 Modern Algebra 3

A standard course in abstract algebra. Various abstract algebra systems such as integral domains rings, fields, and groups are studied from an axiomatic point of view.

Mat 513 Linear Algebra 3

A standard course including vectors, vector spaces, determinants, linear transformations, matrices and bilinear and quadratic forms.

Mat 514 Theory of Numbers 3

A survey of the elementary arithmetic of the integers. The course includes properties of numbers, prime numbers, factorization, congruences and diophantine equations.

Semester Credits

Mat 521 Educational Statistics 2

A course in statistics for teachers. The course include measures of central tendency, deviation, correlation and tests of significance of results.

Mat 522 Advanced Educational Statistics 2

A continuation of Mat 521. It includes applications of various distributions, analysis of variance and covariance and multivariate analysis.

Mat 523 Mathematical Statistics I 3

A course involving the mathematical treatment of random phenomena and an introduction to statistics. Included for study are elementary concepts of probability, conditional probability, compound events, expectation, random variable, and elementary statistics.

Mat 524 Mathematical Statistics II 3

A continuation of Mat 523 emphasizing the mathematical aspects of statistics. It includes correlation, sampling, tests of significance, analysis of variance and other topics.

Prerequisite: Mat 523.

Mat 530 Geometry for the Elementary Grades 3

A course in basic concepts in geometry for the elementary school teacher. Beginning with informal geometry and the concepts of point, line, and plane, the course also includes congruence, similarity, measurement, coordinate geometry, and the postulational method.

Prerequisite: Math 501.

Mat 531 Foundations of Geometry 3

A course in basic concepts in geometry. Beginning with fundamental notions covering point, line and plane, the course also includes statements in geometry, the structure of geometric systems, Euclidean geometry, and an introduction to non-Euclidean geometries.

Mat 532 Modern Geometry 3

A general foundations course in higher geometry. Beginning with a study of axiomatics and the structure of a geometric system, the course also includes Euclidean geometry from the standpoint of the Euclid and Hilbert postulates. Certain topics in projective and hyperbolic geometry are also investigated.

Mat 533 Projective Geometry 3

A course in the projective properties of various configurations. Among the topics included for study are projective theory of conics, duality, harmonic sets, cross ratio, Desargue's and Pascal's Theorems, poles and polar relationships.

Mat 535 Topology 3

An axiomatic approach to the basic notions of point set topology. The following topics are given a rigorous treatment: metric spaces, topological spaces, product spaces, transformations, completeness, compactness and separability.

Mat 541 Advanced Calculus I 3

A course in the foundations of real analysis. Included for study are a rigorous treatment of limits, continuity, derivative, sequences and Riemann integrals.

Semester Credits

Mat 542 Advanced Calculus II 3

Continuation of Mat 541. Included for study are functions of several variables, partial derivatives, implicit function theorems, transformations and multiple integrals.

Prerequisite: Mat 541.

Mat 543 Differential Equations 3

A course in the theory, solution, and application of ordinary differential equations. It includes differential equations of the first and second orders.

Mat 545 Real Variable 3

A course in real analysis. Included for study are the real number system, sets, order, theory of limits, continuity, derivatives and integrals.

Prerequisite: Mat 535 or Mat 542.

Mat 547 Complex Variable 3

A course in complex analysis. Included for study are the complex number system, analytic functions, differentiation and integration, expansions and conformal mapping.

Prerequisite: Mat 535 or Mat 542.

Mat 550 Modern Techniques of Teaching Secondary School Mathematics 2

A course in methods of teaching modern mathematics. Includes the aims of instruction, motivation, teaching methods, and evaluation in the new mathematics. Modern courses of study are analyzed in terms of their content, philosophy, and objectives.

Mat 551 Teaching Secondary School Mathematics to the Low Achiever 2

A course in mathematics for the student of average general ability with a low achievement record in the subject. Emphasis is placed on the development and use of methods and materials which are effective with these students.

Mat 555 Modern Techniques of Teaching Elementary School Mathematics 2

A course in methods of teaching the new mathematics for the elementary grades. The content, philosophy, and objectives of modern elementary school courses of study are analyzed. Stress is placed on the development and use of methods and materials which are effective in the new mathematics.

Mat 556 The Development of the Mathematics Curriculum in the Elementary Grades 2

A course designed to develop the key teacher or coordinator for the modern elementary school mathematics program. The course examines the modern program, stresses curriculum development, develops meaningful scope and sequence, stresses articulation with the secondary mathematics program, examines testing programs, and defines and develops the role of the mathematics coordinator.

Mat 600 Research Report 0-2

Mat 610 Thesis 3

Service Course in Mathematics Open to All Curricula

Semester Credits

CSc 501 Introduction to Computer Programming 3

An introductory course which emphasizes the nature, theory, and use of computers. Includes programming and applications. Specifically designed for the student without mathematics background.

MUSIC

Required Courses

Hum 500 Humanities* 2

(See first page of IV. COURSE OFFERINGS)

Mus 500 Methods and Materials of Research 2

(See first page of IV. COURSE OFFERINGS)

EdF 510 Educational Foundations 3

Mus 510 Current Trends in Music Education 3

Current principles and philosophy in music education in relation to modern educational philosophy and curriculum practices.
Prerequisite: Elementary and Secondary Music Methods

Mus 588-589 Research Seminar 0-2

The seminar is designed to help students carry out a variety of research activities. Emphasis is placed upon the development of research procedures, the presentation of progress reports or completed research, and tutorial work on form and style in research writing.

Mus 600 Research Report 1-2

Mus 610 Thesis 3

Elective Courses for Music Students

Section 1: Music Education

Mus 511 Administration of Public School Music 2

A consideration of administrative problems, curricular content scheduling, in service training of teachers, and supervisory planning will be included. Participants may bring in problems which have been encountered in the supervision and administration of public school music.

Prerequisite: Teaching experience.

Mus 512 Music Education in the Secondary School 2

This course deals with the general music class in the Secondary School with special emphasis on the problems in the Junior High school.

Prerequisite: Secondary Music Methods and Teaching experience.

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* All graduate students beginning graduate work for the first time may waive this requirement with permission of the Dean of the School of Music.

Semester Credits

Mus 513 Music in the Elementary School 2

This course is planned for the music educator with emphasis upon problems, procedures, and materials and their practiced application in the Elementary class room.

Prerequisite: Elementary Music Methods and Teaching Experience.

Mus 514 Pedagogy of Music Theory 2

A study of the techniques and materials for use in teaching the various skills included in courses in music theory. Special emphasis will be placed on a harmonic review and theoretical instruction in the public schools. In addition, a comparative study of the work of outstanding theorists, past and present, will be included.

Mus 515 Marching Band Techniques and Materials 2

A detailed study of the Marching Band including organization, music, materials, care of instruments and uniforms, marching essentials and contemporary techniques.

Mus 516 Piano Pedagogy 2

A consideration of principles and procedures of piano teaching at all levels. Sound practice procedures, as well as the essentials of technique, style, and musicianship will be demonstrated through performance. Opportunity to teach and prepare criticisms will be provided.

Prerequisite: Teaching experience or evidence of sufficient pianistic background to profit from the course.

Mus 518 Vocal Pedagogy 2

A practical approach to the principles and techniques of teaching voice at all levels is presented. Stress is laid upon materials and procedures concerned with improving the tone quality of the individual and/or the group.

Prerequisite: Teaching experience or evidence of sufficient vocal background to profit from the course.

Mus 519 Music Appreciation in the General Music Program 2

A comprehensive study of the many different approaches to the development of musical-understandings which stimulate a sincere appreciation of music. Particular emphasis is placed upon materials and their reflection in pupils' appreciative responses.

Mus 584 Seminar in Piano Teaching and Teaching Materials 2

A seminar giving in-service music teachers and supervisors the opportunity for class study of outstanding examples of the piano literature. The role and integration of the piano into the public school program along with suitable teaching materials for class and private study will be analyzed and used in demonstrations and student teaching.

Mus 585 String Literature and Pedagogy 2

This course is designed to give music teachers an understanding of the problems involved in teaching string classes. It is basically a study of techniques and methods required for the effective teaching of string classes.

Section II: Applied Music

a. Keyboard

Semester Credits

Mus 541-545 Advanced Piano or Advanced Organ 1 or 2

Continued study in all phases of piano or organ performance through the literature from Bach to the contemporary period; opportunity for recital performance will be provided.

Prerequisite: 4 credits in piano or organ with performing experience.

Mus 546-549 Piano Ensemble and Master Class 1 or 2

Emphasis will be placed on the study and performance of accompaniment material, chamber music, and original works and arrangements for four-hands and two-piano combination. Both classical and contemporary literature will be considered. Rehearsal techniques in ensemble playing will receive stress.

Prerequisite: Pianistic ability at a level to function effectively in the class.

Mus 581 Accompanying 2

Designed to consider the principles and problems of accompanying by various types of accompanying experiences in the vocal and instrumental literature. Students are given practical experience in studio accompanying at all levels of difficulty.

Prerequisite: Sufficient pianistic background; 4 credits in piano.

b. Vocal

Mus 503 Advanced Choral Conducting 2

Discussion, study, and practical application of choral conducting techniques involved in the performance of the music of the various schools of choral writing, sacred and secular.

Prerequisite: Choral conducting.

Mus 531-535 Advanced Voice 1 or 2

Continued study in all phases of vocal techniques. Development of repertoire from as many schools as possible including widely contrasting styles for use in church and recital. A voice major should give a recital of three or four groups of songs.

Prerequisite: 4 credits in voice and performing experience.

Mus 536-537 Vocal Ensemble and/or Chorus 1

Participation in the preparation of choral and/or ensemble programs for concert performance.

Prerequisite: Chorus experience equivalent to the undergraduate requirement for chorus; sufficient voice and reading ability to profit by extensive work in this area of participation.

Mus 576-577 Opera Workshop 2

A practical study of the technique of producing musical stage plays. Covers study of music and action only. Includes preparation of roles, coaching, conducting rehearsals and possible public performance. Participants engage in singing, accompanying, directing, etc., as needed to supply the experience.

Semester Credits

Mus 586-587 Vocal Diction (two semesters) 2 or 4

First semester — English, Italian and Latin Diction.

A laboratory course to establish correct pronunciation in singing English, Italian and Latin with practice in the use of the phonetics of these languages in selected standard song repertoire.

Second Semester — French and German Diction.

The study of French and German as applied to singing and the requirements of correct pronunciation through the use of the phonetics of these languages in selected standard song repertoire.

c. Instrumental

Mus 501-502 Advanced Class Instruction in Instruments 1

This class is offered to students who wish to become familiar with the playing and teaching techniques of the orchestra and band instruments.

Prerequisite: String, Woodwind, Brass.

Mus 504 Advanced Instrumental Conducting 2

Study and practice of the problems involved in conducting more advanced music literature. Developing the ability to read and conduct full scores of works involving larger orchestra than used in undergraduate work.

Prerequisite: Instrumental Conducting.

Mus 561-565 Advanced Instruments 1 or 2

Continued study of all phases of technique in relation to the performance of the instrument's repertoire: opportunity for recital performance will be provided.

Prerequisite: 4 credits in instruments and performing experience.

Mus 566-569 Ensemble and/or Orchestra or Band 1

Participation in preparation of programs for concert performance.

Prerequisite: Experience equivalent to the undergraduate requirement.

Section III. Structure and Organization of Music

Mus 521 Advanced Century Counterpoint 2

The use of modes, musica ficta and cadences in sixteenth century music. Experience will be provided in imitation in two parts using all note values, double counterpoint, the pronunciation and setting of Latin texts.

Mus 522 Advanced Composition and/or Orchestration 2

Creative work in various forms.

Prerequisite: A knowledge of the instruments of the orchestra and experience in their use in original composition.

Mus 523 Advanced Band Arranging 2

Emphasis is placed on arranging for the high school band. Consideration is given to Bands with inexperienced players and limited instrumentation. Students will have the opportunity to hear their arrangements performed.

Prerequisite: Orchestration or Teaching experience.

Semester Credits

Mus 528 Twentieth Century Musical Styles 2

A theoretical study of the techniques of representative contemporary composers. Emphasis is placed upon the compositional techniques used and includes the study of harmony and form as these bear upon the problems. Creative work in the styles of the composers studied will be attempted.

Mus 582 Advanced Musical Form 2

The detailed study of musical form with special emphasis on the modifications of sonata form; the forms of Baroque music, vocal and instrumental; and the Unique forms.

Section IV. Literature and History of Music

Mus 505 Contemporary Music 2

A study of the techniques and artistic movements of the 19th century necessary for the understanding of contemporary music. Musical styles and techniques of the 20th century will be studied utilizing recordings, performances, scores, periodicals, etc. Individual composers will be discussed along with the analysis of selected works. The contribution of America to the contemporary musical scene will be emphasized.

Mus 506 Instrumental Literature 2

Instrumental materials for public school groups at all levels are discussed and evaluated. Program building and music for special programs are emphasized. Actual performance and recordings are used when possible.

Prerequisite: Instrumental methods and performing experience.

Mus 507 Vocal Literature 2

A course designed to meet the needs of students, artists, and teachers giving them a performing and teaching command of representative song repertoire and program building. Materials includes classic song literature, lieder, modern songs, and arias from standard operas and oratories illustrated by performance of and by records, members of the class, and the instructor.

Prerequisite: 4 credits in voice and performing ability.

Mus 508 Choral Literature 2

A study of the music used for purposes of choral ensemble through the course of the history of music as an art. Study by participation in actually singing of the material, and by research into some single phase elected by the student with the approval of the professor.

Mus 509 Piano Literature 2

A course designed to meet the needs of the performing students, teachers, through the medium of records, discussion and performance of great piano literature.

Prerequisite: Performing experience.

Mus 525 Woodwind Literature 2

A comprehensive evaluation of materials for solos and ensembles through actual performance and the use of recordings form the basis for this course.

Prerequisite: Performing experience.

Semester Credits

Mus 526 Brass Literature 2

A comprehensive evaluation of materials for solos and ensembles through actual performance and the use of recordings form the basis for this course.

Prerequisite: Performing experience.

Mus 527 History of the Opera 2

Detailed study of the composers and their major contributions to the opera movements.

Prerequisite: 6 credits of History of Music.

Mus 583 Music in the Baroque Period 2

A historical and appreciative study of music from 1600 to 1750, with special attention to stylistic and formal developments; significant trends and their relationship to general history and subsequent evolution of the art; some biographical study including Bach and Handel. Outside reading, research papers and classroom discussion required.

Mus 591 Music in the Romantic Era 2

This is a course in musicology concentrating on the developments in music during the Romantic Period, roughly between 1800-1900. It analyzes the changes and trends that took place, and presents the new forms in their comparative aspects. The course deals with ideas and movements, and presents composers and their works as they pertained to objectives and understandings.

Section V.

ELECTIVE COURSES FOR ALL STUDENTS

Mus 520 Instrument 1

Mus 530 Voice 1

Mus 540 Piano 1

Mus 550 Organ 1

Students in any curriculum may elect to study an instrument, voice, piano, or organ and receive credit upon demonstration of satisfactory progress. One individual lesson each week.

Mus 560 Study and Appreciation of the Opera 2

Hearing and studying of the opera from its origin to the present. Works from Monteverde to Gluck to Briten, Menotti, and Stravinsky will form the "repertoire" of this course. Greater emphasis will be placed on the most significant contributors to the development of the opera.

Mus 571 Music Criticism and Aesthetics 2

Exercises in writing musical criticism and essays will be undertaken. Aesthetic concepts of different eras will be discussed.

Mus 590 Study and Appreciation of The Symphony 2

An elective course open to music majors and students from other departments and fields of interest. A course presenting the musical forms and literature of the symphony in an intelligible, stimulating,

and enjoying way. The course evaluates the basic instrumental forms which directly influence the development of the symphony and follows a comparative growth and expansion through the contemporary period in music. Paramount in the course is the non-technical approach to analysis and the development of meaningful listening procedures for a representative number of carefully chosen compositions from the standard literature for the symphony.

Elective Courses for Elementary Education Students

Mus 572 Vitalizing Music in the Elementary School 2

A course planned primarily for elementary teachers. It aims to prepare them to teach more effectively and to enrich the program of Music Education in the schools. This will be brought about through study of the various series of song and rhythm materials currently available for use in elementary schools. It will develop the basic knowledge of simple instruments such as the xylophone, autoharp, and percussion.

Mus 573 Keyboard Activities for the Classroom Teacher 2

Designed primarily for the elementary classroom teacher through a functional study of the piano. Grasp of fundamental principles of accompanying classroom singing, rhythmic and creative activities by studying and performing practical classroom materials.

Mus 574 Teaching of Music Appreciation in the Elementary Grades 2

A course designed for elementary teachers. It aims to provide suitable and available materials from which units of study for a specific grade are organized for the purpose of enriching the music program. Emphasis is placed upon the use of audio-visual materials.

SERVICE COURSES IN PHILOSOPHY

Phi 500 Methods and Materials of Research in Philosophy 2

A survey of bibliographical aids in philosophical research; primary and secondary sources; journals and monographs; identification of issues; evaluation of points of view; the goals of philosophy; styles and modes of presentation of philosophic thought.

Phi 510 Existentalism 3

A study of the background and themes of current existentialism, as reflected in major existentialist works. Particular attention will be given to Kierkegaard, Jaspers, Marcel, Heidegger, and Sartre. The course is designed to help students make their own evaluation of existentialism itself, and of its impact on contemporary literature, drama, art, and society.

Phi 511 Philosophic Concepts 3

A study of concepts basic to the philosophic enterprise, such as, form, matter, the categories, cause, and purpose. The relation of premises to method and conclusions. Rival theories will be compared for justification and adequacy.

Semester Credits

Phi 512 Contemporary Ethical Theories 3

A philosophic examination of various ethical theories of our time. Pragmatism, evolution, idealism, hedonism, natural law, and other schools will be considered. Practical applications will be made to such problems as authority, punishment, rights, marriage, and race.

Phi 513 Philosophy of Art 3

The history of aesthetics, as seen in classic interpretations. The relation of aesthetic theories to one another, and to works of Art. The origins of art, psychological and sociological; the role of art works in the enrichment of life.

Phi 514 Philosophy of Religion 3

A critical study of dominant trends in religious philosophy of the Western world. Religious language, reason and faith, science, the nature of man, the existence of God, and mysticism.

Phi 520 Philosophy of Mind 3

The human mind, according to representative views. Presuppositions and implications, both scientific and philosophic, will be traced and analyzed. The mind-body problem: perception: memory: and the implications of depth psychology.

Phi 521 Philosophy of the Social Sciences 3

Philosophic issues in the social sciences: the sense in which they are "scientific; laws, procedures, and prediction. The formation of concepts and theories; the evaluation of evidence and cause; and the determination of patterns and goals.

Phi 522 Philosophy of Science 3

The course will begin inductively with case studies in science, and will derive general principles from them. Scientific law, analogy, models, variant theories, confirmation, and interpretation.

Phi 523 Philosophy of Language 3

A study of the problems of language and communication. Emphasis will be on issues raised by contemporary analytic philosophers. The relation of language to reality, knowledge, and logic, syntax, semantics, and pragmatics: the language of description and value.

Phi 530 American Philosophy 3

A study of the intellectual leaders of American life. Their impact on economics, history, science, and literature, from Colonial times to the present.

Phi 531 Oriental Philosophy 3

A survey of the rich heritage of Eastern philosophy and religion. Central figures and classic teachings of Islam, Hinduism, Buddhism, Confucianism, Taoism, and Shintoism, as well as naturalistic and humanistic elements of decisive influence on the culture of the Orient.

Phi 540 Plato Seminar 2

Plato's life, development and doctrines. A detailed study of several chief dialogues, from the standpoint of critical interpretations.

Semester Credits

Phi 541 St. Thomas Aquinas 2

Major themes of St. Thomas from the *Summa Theologica* and the *Summa Contra Gentiles.* His view of man, the good, the beautiful, the true, the state, the world of Nature, and of God.

Phi 542 Kant Seminar 2

This course will be a study of Kant's *Critique of Pure Reason,* with reference to his development, and his contributions to ethics, aesthetics, and philosophy of religion.

PHYSICAL SCIENCE

PSc 500 Philosophy of Science 3

Ethical and social implications of modern science and technical skills. The course will deal with scientific methods of inquiry, choice of experimental techniques, and logical interpretation of results.

Prerequisites: Completion of an undergraduate major field in one or more of the sciences.

PSc 501 Historical Geology 3

The history of plant and animal life on our planet, as shown in the record of the rock formations. Field trips to visit museums as well as laboratory experiences in the study of living forms and fossils will aid graduate students in the comprehension of the great literature of paleontology.

Prerequisite: Completion of an undergraduate field in biological science or general science or the equivalent.

PSc 502 Modern Trends in Teaching Physical Science 2

An introduction to the newest materials and techniques in high school physics.

Prerequisite: One year teaching experience in physics.

PSc 503 Principles of Physical Geology 3

The examination of minerals and rocks will permit the student to understand the composition of the earth. In order to comprehend earth processes the mechanics of weathering, erosion, volcanism, and diastrophism will be discussed. Geologic and topographic maps and aerial photos will be examined and interpreted in order to understand geologic features.

PSc 506 Seminar in Physical Science 1

Topics vary from year to year depending upon the background and interest of the students.

Prerequisite: Three graduate courses in physical science.

PSc 507 Recent Advances in Physical Science 3

A consideration of selected current developments in physical science including their scientific significance and social or economic implications. Open to all students in the Graduate School.

PSc 508 Nuclear Physics for Teachers 3

A discussion of nuclear reactions, radioactivity, and aspects of nuclear structure.

Prerequisite: Physics I and II. One course in Modern Physics.

Semester Credits

PSc 510 Electronics for Teachers 3

Electronic circuits using either vacuum tubes or solid state devices are analyzed, constructed, and tested. Topics included are rectification, amplification, oscillation, and selected test circuits. Two hours lecture and two hours laboratory.

Prerequisite: Physics I and II.

PSc 511 Electricity for Teachers 3

An analysis of the principles of electricity and electromagnetism.

Prerequisite: Ability to use differential and integral calculus. Physics I and II.

Two hours lecture and two hours laboratory.

PSc 512 Mechanics for Teachers 3

Mathematical analysis of dynamics and statics.

Prerequisite: Ability to use differential and integral calculus. Physics I and II.

PSc 513 Modern Physics for Teachers 3

An introductory study of 20th century contributions and ideas including special relativity, quantum theory, atomic structure, and solid state structure.

Prerequisites: Two semesters of general physics.

PSc 520 Earth Science for Secondary School Teachers 3

Earth Science laboratory and field exercises, suitable for secondary school use, will be demonstrated and practiced. Present concepts and techniques in the earth sciences will be discussed and evaluated. The student will get acquainted with earth science literature and equipment that is available to the secondary school teacher.

PSc 521 Mineralogy for the Science Teacher 3

Properties and occurrence of the common and industrially important minerals and their identification in the laboratory. Strategic and critical minerals and the relationship between mineral resources, national development and security will be studied.

Prerequisite: Two semesters of Inorganic Chemistry.

PSc 524 Experimental Physics 1-3

A study of classical experiments in modern and atomic physics. There will be some library study and some laboratory study of these experiments. Experiments selected will vary depending upon the background and interest of the students.

Prerequisites: A course in atomic or modern physics.

PSc 532 Space Science 3

Selected topics from astronomy and related sciences. The major emphasis is upon the problems of exploring the universe beyond Earth's atmosphere and typical results that are being obtained. Open to all students in the Graduate School.

PSc 560 Workshop in Rocks and Minerals 3

The most common rocks and minerals will be examined, and their significance will be discussed. Simple classroom methods that help in the identification of rocks and minerals will be demon-

strated. Elementary explanations as to the origin and relation of the common rocks and minerals will be presented. This workshop will give the elementary teacher a cursory knowledge of the rocks and minerals that are most likely to be found by students.

PSc 562 General Geologic Field Studies in Southeastern Pennsylvania 3

Field areas in southeastern Pennsylvania will be visited in order to study the occurrence and relationships of minerals, rocks, and other surface features. Field techniques will be demonstrated so that the student can describe, map, and interpret the phenomena he sees in the field.

PSc 590 History of the Physical Sciences 3

Developments from Aristotelian concepts to those established by modern scientific methods. Emphasis will be placed on the role of discoveries in the physical sciences in the development of great nations.

Prerequisites: Two semesters of Inorganic Chemistry or two semesters of College Physics.

Che 541 Selected Topics in Physical Chemistry 3

This course is designed exclusively for teachers of chemistry. The properties of the states of matter, elements of chemical thermodynamics, theory of solutions. electro-chemistry, chemical equilibrium and chemical kinetics will be included.

Prerequisites: Integral Calculus, General Chemistry, General Physics.

Sci 595 Elementary Science Curriculum and Instruction 3

A course for inservice elementary school teachers and administrators designed to: improve the science backgrounds of elementary teachers through the investigation of selected science areas; provide the elementary teacher with knowledge of the new developments in the elementary school science curriculum; provide opportunity for the demonstration of experiments appropriate for the elementary grades; and provide elementary teachers with an opportunity to construct science instructional aids, to develop a resource library, and to collect experiments and demonstrations suited to the elementary school science curriculum.

PHYSICS

Phy 501 Introduction to Theoretical Physics 3

Usually required as the first course for graduate physics students. A mathematical treatment of selected topics in theoretical physics. The harmonic oscillator, planetary motion, kinetic theory of gases, statistical mechanics, plasma physics.

Prerequisite: Qualification for admission to the graduate program.

Phy 505 Modern Trends in Physics Teaching 2

A critical study of the philosophy, techniques, subject matter, and effectiveness of current secondary school physics courses. These will be examined in relation to the changing character of American society and technology.

Semester Credits

Phy 506 Analytical Mechanics 3

An advanced study of classical mechanics. Variational principles, La Grange's equations, two-body central force problem, the kinematics and equations of motion of rigid bodies, Hamilton-Jacobi theory, special relativity.

Prerequisite: Physics 501.

Phy 513 Electromagnetic Theory I 3

Solution of problems in electrostatics, boundary value problems: Electrostatics of microscopic media, dielectrics; magnetostatics; time-varying fields, Maxwell's equations, electromagnetic waves.

Prerequisites: Physics 501 and Mathematics 542.

Phy 531 Modern Physics 3

A study of modern developments in physics. Atomic and kinetic theory, the electron, atomic structure and spectra, X-Rays, natural radioactivity, induced nuclear transformation, high energy nuclear processes.

Prerequisite: Admission to graduate program in physics.

Phy 532 Electromagnetic Theory II 3

Wave guides and resonant cavities; radiation; magnetohydro-dynamics; special theory of relativity; relativistic- particle kinematics and dynamics, radiation damping.

Prerequisite: Physics 513.

Phy 533 Statistical Mechanics 3

Generalized canonical formulations of quantum statistics; applications to various thermodynamical systems; irreversible processes.

Prerequisite: Physics 501.

Phy 541 Quantum Mechanics I 3

Historical Origins; wave packets and the uncertainty principle; the Schroedinger equation, applications; operations and eigenfunctions; the hydrogen atom.

Prerequisites: Physics 506 and Physics 551.

Phy 542 Quantum Mechanics II 3

Theory of scattering; matrix mechanics, angular momentum and spin; perturbation theory.

Prerequisite: Physics 541.

Phy 551 Mathematical Physics 3

A study of the mathematics needed in modern physics; Calculus of Variations, Boundary-value problems by separation of variables; Green's function; integral transform methods; complex variables; contour integration.

Prerequisites: Mathematics 541 and 542.

Phy 581 Thesis 3

Phy 591 Seminar 1

A presentation of written and oral reports by the students on problems and topics of current interest in Physics. It may be repeated for additional credit, using different topics.

Prerequisite: Consent of the Department.

Semester Credits

Group I. AMERICAN HISTORY

His 510 Colonial and Revolutionary America: 1607-1783 2

A study of English colonization of North America; the relations of the colonies to the mother country; the political, economic, social and cultural developments of these colonies; the causes of the Revolution; and the struggle for independence culminating in the Peace of Paris of 1783.

Prerequisite: His 211.

His 511 The Rise of the New Nation: 1783-1850 2

An intensive study of the growth of the new nation with emphasis upon the problems of emerging federalism, the development of the constitutional foundations of the republic, the rise of the Federalist Party, the emergence of Jeffersonian Democracy, the evolution of Jacksonian Democracy and the events of the middle period leading to the decade of controversy. The concepts of nationalism, sectionalism and democracy are especially examined.

Prerequisite: His 211.

His 512 Civil War and Reconstruction: 1850-1876 2

Study of the conflict between North and South from the Compromise of 1850 through the disputed election of 1876. Among problems considered are the intensification of the sectional struggle, secession, major wartime problems of the Union and the Confederacy, principal military campaigns, the Reconstruction Era and the efforts to create a new Union. The significance of the Civil War and Reconstruction in American History is especially emphasized.

Prerequisite: His 211 or His 212.

His 513 Emergence of Modern America: 1876-1919 2

Covers the rise of industry, labor, immigration, and new cultural patterns. Coupled with this is the emergence of new political alignments, the rise of imperialism, and the development of liberalism and reform. America's struggle for neutrality and participation in World War I complete this area of study.

Prerequisite: His 212.

His 514 The United States as a World Power: 1919-Present 2

A study of America's development as a world power. It deals with the impact of industrialization upon society, politics, and economics; the problems of the war and post-war periods; and the work of our nation toward world unity. Emphasis is placed on the immediate background of current affairs.

Prerequisite: His 212.

His 515 Problems in American Constitutional Development 3

Selected problems in the development of American constitutional government. Emphasis is on the progressive adaptation of the law to a changing social and economic order. Such conflicts as nationalism versus states rights and vested rights versus police power are investigated.

Prerequisite: His 211 or His 212.

Semester Credits

His 516 Recent American Diplomatic History 2

A study of American foreign policy in Europe, Asia, Latin America, and the Middle East from 1939 to the present. In each area of study there is presented the objectives sought by the United States and the political, military, economic, and social policies it pursued in an attempt to achieve these objectives. Special detail is given to two fundamental issues on which free-world survival depends — the nature of our military strategy and the future of underdeveloped countries.

Prerequisite: His 212.

His 550A Seminar in American History 2

Selected problems in American History. Open to graduate majors who have had Ssc. 500 and two courses from Group I. Announcement of the proposed subject will be made in advance of each seminar. Seminar may be used as the supporting elective for the department thesis or research report.

Group II. European History

His 530 Problems in Medieval Civilization 3

From among the many facets of medieval life and history it is proposed to single out specially the following: the rise and fall of the Byzantine Empire, the conquests of the Arabs and Turks, and the successive crusades for the recovery of the Holy Land. Since the crusades originated in the West it will also be necessary to deal with the different religious orders and the universal aspirations of the Papacy.

Prerequisite: His 101 or His 218.

His 531 The Renaissance 2

Emphasis will be placed on causes of the Renaissance, as well as on Humanism and religious trends during the period. The political, military and economic developments of the age will be stressed as laying the foundations for modern Europe, as well as the great artistic and intellectual achievements. Although special attention will be given to Italian contributions, the Northern Renaissance will also be thoroughly covered.

Prerequisite: His 102 or His 220 or His 221.

His 532 The Protestant Revolution 2

A consideration of the major and minor Protestant leaders and the movements they founded; the effects of these on the evolving nation-states; the Church of Rome's response; the Wars of Religion and the Treaty of Westphalia; the Scientific Revolution.

Prerequisite: His 102 or His 220 or His 221.

His 533 Dynastic Europe: 1648-1789 2

The absolute dynastic monarchy as best exemplified by France, Prussia and Russia; the middle-class challenge as typified by the English experience; the Enlightenment and the New Science: capitalism, colonialism, and the wars of empire.

Prerequisite: His 102 or His 221.

His 534 The French Revolution and the Napoleonic Era: 1789-1815 2

A study in depth of the causes of the French Revolution, the failure of Absolutism, the Reign of Terror, the Directory; the rise of Napoleon Bonaparte, his contribution to the Revolution, the Empire — its rise and collapse; the Congress of Vienna.

Prerequisite: His 102 or His 221.

His 535 Nationalism and Democracy: 1815-1914 2

The course will emphasize the aftermath and effect of the French Revolutionary era, with particular attention to the events brought on by the growth of nationalism and democracy, and to those occasioned by the development of the industrial revolution. Toward the end of the period, the roots of the First World War, arising from the events and trends, will be examined.

Prerequisite. His 102 or His 222.

His 536 Europe Since 1914 2

A study of twentieth century Europe with emphasis on the causes of World War I; the problems of Europe between World War I and World War II; and the problems of contemporary Europe.

Prerequisite. His 102 or His 222.

His 540 The Evolution of Modern Russia 3

This course involves a study of the religious, social, political and economic forces at play in Russia since the reign of Alexander II and the period of the great reforms. It will trace the emergence of Russia as a capitalist society and the subsequent collapse of this society through Communism. The present Soviet State will be examined both ideologically and politically and its role in the modern world scrutinized.

Prerequisite: His 102 or His 222 or His 326.

His 541 Tudor and Stuart England 2

Social, cultural, religious, political and economic developments during the Tudor and Stuart reigns: building a strong Tudor monarchy, English Reformation, Stuart, Absolutism; Puritan Revolution, Civil War and the Commonwealth, the beginning of Empire; the Restoration, the Glorious Revolution and growth of English constitutionalism.

Prerequisite: His 102 or His 222 or His 321.

His 550B Seminar in European History 2

Selected problems in European History. Open to graduate majors who have had Ssc. 500 and two courses from Group II. Announcement of the proposed subject will be made in advance of each seminar. Seminar may be used as the supporting elective for the departmental thesis or research report.

Group III. Social Sciences

A. Anthropology-Sociology

Ant 530 Problems in Anthropology 3

An intensive survey of several of the major aspects of both Physical and Cultural Anthropology. Emphasis will be placed on topics

suitable for discussion and study in the elementary and secondary curricula. Some background in Anthropology is recommended, but is not required.

Prerequisite: Ant 231.

Ant 550 Seminar in Anthropology 2

Selected problems in Anthropology. Open to graduate majors who have had Ssc. 500. Announcement of the proposed subject will be made in advance of each seminar. Seminar may be used as the supporting elective for the departmental thesis or research report.

Soc 531 Social Pathology 3

A study of cultural patterns defined by society as undesirable. Analysis of the role of social science principles relating to the functioning of the family, education, and the state in modern society. Pathological patterns in the economic, educational, and political life resulting in social disorganization.

Prerequisite: Soc. 231.

Soc 532 Historical Sociology 3

A study of the history of social thought from early primitive beginnings to recent contemporary times. It makes use of social thought in Europe and America. Emphasis is given to a survey of the work and personalities of outstanding American sociologists projected on the background of social theory and research.

Prerequisite: Soc 231.

Soc 533 Intergroup Relations 3

A study of the social processes and specific concepts relative to groups with emphasis upon conflict; interaction group behavior and related areas will be the major interests for study, with the sociological principles of social awareness and prevention given considerable attention in the course.

Preerquisite: Soc 231.

Soc 550 Seminar in Sociology 2

Selected problems in Sociology. Open to graduate majors who have had Ssc. 500. Announcement of the proposed subject will be made in advance of each seminar. Seminar may be used as the supporting elective for the departmental thesis or research report.

B. Economics

Eco 530 Economics and Public Policy 3

The principles and methods of economic analysis are applied to an evaluation of the performance of the economic system. Alternative public policies to deal with important economic problems are assessed and compared. Specific topics considered include inflation, recession, and economic growth: problems of public finance and taxation, and public policy with regard to the concentration of economic power.

Prerequisite: Eco 231.

Eco 531 Comparative Economic Systems 3

A study of major forms of economic organizations with particular emphasis on those existing today. The course is presented so as to

contrast the structure of capitalism, socialism, communism and fascism. fascism.

Prerequisite: Eco 231.

Eco 532 History of Economic Thought 3

The historical evolution of the major economic doctrines; mercantilists and cameralists; physiocrats; Adam Smith and the classical school; the historical school; the Austrian school; Alfred Marshall and the neoclassicists.

Prerequisite: Eco 231.

Eco 550 Seminar in Economics 2

Selected problems in Economics. Open to graduate majors who have had Ssc. 500. Announcement of the proposed subject will be made in advance of each seminar. Seminar may be used as the supporting elective for the departmental thesis or research report.

C. Political Science

Psc 531 Modern Political Theory 3

Critical analysis of enduring political problems, primarily in the writings of European theorists from Machiavelli to the present; an analysis of the basic concepts of political science; and theories concerning the proper role of the State in society.

Prerequisite: Psc. 231 or Psc 338.

Psc 532 Seminar in International Relations 3

A study of the factors which motivate the actions of nations on the contemporary international scene; with special emphasis on the machinery which members of the nation-state system have evolved for giving effect to their various policies. The methods of diplomacy, international law, and international organization are stressed.

Prerequisite: Psc 231 or Psc 333.

Psc 533 The American Legislative Process 3

An examination of the legislative process in the United States with special emphasis placed upon the executive-legislative relationship. Critical attention is directed to the changing role of the legislature in America's balanced government.

Prerequisite: Psc 231.

Psc 540 Democracy and Totalitarianism 3

The course is designed to develop well reasoned knowledge of the political principles and philosophy underlying both democracy and totalitarianism. Emphasis is placed on the modern configuration of these two developing lines of political thought and practice. The course is constructed to ensure maximum student participation in analysis of these modern theories of political organization.

Prerequisite: Psc 231 or Psc 335.

Psc 550 Seminar in Political Science 2

Selected problems in Political Science. Open to graduate majors who have had Ssc. 500. Announcement of the proposed subject will be made in advance of each seminar. Seminar may be used as the supporting elective for the departmental thesis or research report.

Semester Credits

Group IV. SPECIAL STUDIES

Eco 533 Teaching Economics in Secondary Schools 2

This course is designed for teachers of economics in the secondary schools. Major importance is attached to the development of basic principles of economic reasoning and analysis. Methods by which these principles can be taught are studied and discussed, and teaching materials and aids are evaluated. Attention is especially given to suggested procedures and resources for a minimum course in economics in the secondary schools.

His 523 Contemporary World Affairs 2

An analysis of the causes of the cold war between the U.S.S.R. and the United States and the Western Democracies; contemporary efforts to realize peaceful coexistence of the democracies with the Communist dictatorships; and the impact of the nationalist movements of the peoples of Asia and Africa on contemporary world politics.

Prerequisite: His 102 or His 325.

His 524 Studies in the History and Culture of South Asia 3

A basic study of the Indian sub-continent's dominant political, cultural and economic institutions within an historical framework. Those features which contribute to an understanding of modern India and Pakistan will be emphasized.

Prerequisite: His 101-102 or His 322.

His 525 Studies in the History and Culture of East Asia 3

The traditional basis for modern Chinese, Japanese and Korean society will be examined within an historical framework. Special emphasis is placed on the interaction of European and Asian culture and the resulting changes thereby brought about in East Asia.

Prerequisite: His 101-102 or His 329.

His 526 Workshop in World Cultures 2

A workshop for teachers-in-service who are assigned to teach World Cultures in the secondary schools of Pennsylvania. The objective of the workshop is to provide an opportunity to study the western and non-western cultures through the use of resource persons and faculty; through research in recent reference materials; and through consultation with representatives of cultural regions.

Prerequisite: His 101-102.

His 527 Studies in the History and Culture of Emerging Africa 3

The emergence of modern African nationalism is examined against the background of traditional African society and the legacy of European colonialism. The influence of colonialism in modern African history is especially emphasized.

Prerequisite: His 102 or His 328.

Ssc 500 Methods and Materials of Research in the Social Sciences 2

Designed to acquaint the student with the basic techniques and procedures in research, this course treats with the major types of research and the methods for locating, evaluating, and interpreting evidence. Each student develops a tentative outline, bibliography, and summary of investigative procedure for a thesis or research report that must be completed before graduation. A study in historiography and the development of the social sciences are also presented as background material for this course.

Semester Credits

Ssc 502 Methods and Materials for Teaching Social Studies 2

The course is designed to acquaint teachers with current practices and procedures in the Social Studies field with emphasis upon organization and planning; the use of classroom, library, and curriculum materials; testing, measurement, and evaluation; and bibliographical sources for both teachers and students.

Ssc 550 Seminar in Contemporary European Culture 6
(Student European Tour)

A fully guided tour of Europe with visits to important areas of the major countries. The tour is organized as a seminar with a number of orientation discussions before departure. Opportunity will be provided for questions and discussion periods en route. An annotated diary of the tour will be required from each student, plus a paper in which the student will be encouraged to do individual research on some particular facet of the tour which interests him. Every summer.

Ssc 600 Research Report 2

The research report maintains the same form of reporting results as the thesis, but a research report has a greater degree of brevity and a more narrow scope. Also, the report is limited mainly to sources that can be found in libraries and historical societies close at hand. Mainly the aim of the research report is to give the student practice in research techniques and methods of reporting the results.

Ssc 610 Thesis 3

The thesis differ from the research report mainly in three aspects: it is of larger scope, it must contain primary sources (as well as secondary), and it must develop arguments to support a proposition or theory. A thesis also tries to bring forth new information. It is permissible to deal with a thesis topic that has been developed in some earlier investigation, *provided* the recent researcher, covering old ground, presents a new interpretation of the information or new evidence that is significant.

Supporting Elective

The graduate student must take course work in fields of study necessary to augment his background for work on his thesis or research report. If the thesis or research report is in the realm of colonial history, for example, his supporting elective must be in Colonial History. The elective might be in another department, but only if the thesis or research report subject warrants this. A thesis or research report in colonial literature for example, would be supported by a course in American Literature.

ART COURSES

Open to all Curricula

Art 511 Sculpture 3

This course offers the student an opportunity to develop an individual expression in relation to three dimensional design. The student will have the experience of working in a variety of mediums, such as wood, clay, plaster and certain metals. The materials are treated experimentally with the aim of achieving creative interpretation. While this course is designed for all curricula the Elementary Art instructor will find it of special value.

Semester Credits

Art 512 Painting 3

A course for all curricula designed to develop an individual expression in painting. Experimental use of the medium and the compositional elements of painting are stressed.

Art 513 Ceramics 3

A course for all curricula. Experimentation with the plastic characteristics of clay. Understanding of materials, techniques, and processes involved in ceramcs. Introduction to coil, slab, mold, and wheel methods of construction; knowledge of clay bodies, glazes, textures, kiln firing, etc. Emphasis upon design as an organic outgrowth of the ceramic process.

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WEST CHESTER STATE COLLEGE

WEST CHESTER, PENNSYLVANIA

APPLICATION FOR ADMISSION TO GRADUATE STUDY

Matriculation fee of $10.00

(Please complete and return to Graduate Office)

INSTRUCTIONS: This application form and *two official undergraduate transcripts* (including your undergraduate *cumulative average*) must be filed with the Graduate Office by the deadline dates indicated in the catalog. If the applicant plans to transfer graduate credits from another college or university, he should also submit two official transcripts of these courses and a letter of request. Notification of acceptance will be sent after all required transcripts of previous college courses have been received and evaluated. Consult the current Bulletin of Graduate Studies for dates of the period of registration. After this application form and transcripts have been submitted to the Graduate Office, the applicant *must* arrange for a personal interview with the Dean of Graduate Studies and the department chairman or graduate coordinator.

(Type or Print Clearly)

1. Name in full ..... (Last name) ..... (First name) ..... (Middle name)
2. Maiden name ..... (Last name) ..... (First name) ..... (Middle name)
3. Mailing address ..... (Street) ..... (City) ..... (County)

   ..... (State) ..... (Zip Code) ..... (Tele. Number)
4. Place of Birth ..... Date of Birth ..... (Month Day Year)
5. Social Security Number ..... Citizen of the United States Yes ..... No .....
6. When do you plan to begin graduate study at this college? .....
7. Are you planning to study full or part-time? .....
8. Your ultimate purpose in taking graduate work is: ..... Degree Candidacy; ..... Certification; ..... Transfer of Credit; ..... Professional Growth;
9. List all colleges in which you have been enrolled:

	Name of School	Location	Dates Attended	Dates of Graduation	Degree
a.	Colleges or Universities Undergraduate Study				
b.	Colleges or Universities Graduate Study				

Undergraduate Major ..... Proposed Graduate Major .....

(See other side)

10. List any physical handicaps or health problems .....

Will these affect your class attendance?..... If so, to what extent?

.....

11. Teaching experience .....

Place..... Dates..... State..... County.....

Position held or subjects taught .....

.....

.....

12. Have you ever been dismissed or disqualified from any other institution of higher learning? Yes..... No..... Institution.....

13. Are you now doing work in any other colleges or universities? Yes.....

No..... If your answer is yes, name the course.....

Institution.....

14. Name the teaching certificate(s) or administrative certificate(s), if any, you now hold:..... Issued in what state?.....

15. Do you expect to use G.I. benefits to help pay the costs of this program?

Yes..... No.....

16. Give the name and address of three qualified persons who can be used as references.

Name	Address	Occupation

Signature of Applicant..... Date.....

DIVISION OF GRADUATE STUDIES

WEST CHESTER STATE COLLEGE
WEST CHESTER, PENNSYLVANIA

Application For Admission To Candidacy For The Degree
MASTER OF EDUCATION

Name ..... Major .....

Address ..... Married ☐ Single ☐

Date of First Enrollment in Graduate Courses at West Chester .....

Nature of Original Admission: ☐ Conditional ☐ Unconditional

If admission was conditional, have all conditions been removed? .....

Deficiencies .....

Recommended Graduate courses .....

Results of Graduate Record Examinations .....
Date Aptitude (%) Adv. (%)

Graduate courses completed at West Chester:

Co. No.	*Course*	*Grade*	*Credits*	*Year*	*Professor*

Graduate courses now being taken:

Co. No.	*Course Title*	*Grade*	*Credits*	*Professor*

Graduate courses taken in other institutions:

Co. No.	*Course Title*	*School*	*Grade*	*Credits*	*Years*

Do you intend to ask for transfer of credit from other institutions? .....

If so, what specific courses?

Co. No.	*Course Title*	*School*	*Grade*	*Credits*	*Year*

.....
Signature of Applicant

.....
Date

I have examined this application for admission to candidacy for the Master's Degree and recommend that it be: Approved..... Disapproved.....

I further recommend that ..... semester hours of credit earned at ..... College or University in courses titled,

.....

.....

be accepted for transfer to the West Chester State College.

Professor ..... of the ..... Department is recommended for assignment as this student's advisor and/or chairman of his Research Committee, if applicable.

COMMITTEE

.....

.....

.....

.....

Graduate Coordinator

Action of Graduate Council

Approved ☐ Disapproved ☐

.....
Dean of Graduate Studies

.....
Date

THIS FORM MUST BE APPROVED AND ON FILE PRIOR TO THE ACCUMULATION OF THE SIXTEENTH CREDIT.

GRADUATE STUDENTS
WITHDRAWAL FROM COLLEGE

The student listed below is withdrawing from the West Chester State College Graduate School immediately ..... or end of semester .....

....
Nome Date

....
Curriculum Year in College

Please check your records for any outstanding obligations the student may have and sign if cleared by your division.

Bookstore .....

Library .....

Dean of Student Affairs .....

Dean of Men or Women .....

Director of Athletics .....

Business Office—ID Card .....

Security Officer .....

Dept. Chairman .....

NDEA Loans—Business Office .....

WILLARD J. TREZISE
Dean of Graduate Studies

GRADUATE DIVISION

WEST CHESTER STATE COLLEGE
WEST CHESTER, PENNSYLVANIA

REQUEST FOR WITHDRAWAL FROM GRADUATE COURSES

A student wishing to withdraw from a graduate course or courses, but not from College, should file this request with the Dean of Graduate Studies.

Name of Student .....

Address .....

Semester Withdrawing from .....

Date of Last Class Attended .....

Total Number of Courses Originally Registered for.....Credits.....

Permission Requested to Withdraw From the Following Graduate Course/s:

Title & Number of Course	*Credits*	*Professor*

Reason for Withdrawal .....

.....

ALL REFUNDS WILL AUTOMATICALLY BE CREDITED TO YOUR ACCOUNT UNLESS A LETTER REQUESTING A RETURN OF THE REFUND IS FILED WITH THE OFFICE OF BUSINESS AFFAIRS.

By action of the Board of Presidents, the following policy applies to all cases of refunds:

1. Withdrawals occurring before the second scheduled class meeting—REFUND OF ALL BUT $10 OF THE FEES PAID.
2. Withdrawals occurring no later than one-third of the scheduled class meetings—REFUND OF ONE-HALF OF THE FEES PAID.
3. Withdrawals occurring after one-third of the scheduled class meetings—NO REFUND

Request for Withdrawal Approved.....Date.....

CORRESPONDENCE DIRECTORY:

Admission to Graduate Studies ..... Dr. Willard J. Trezise, Dean
W. Clyde Skillen, assistant to the Dean

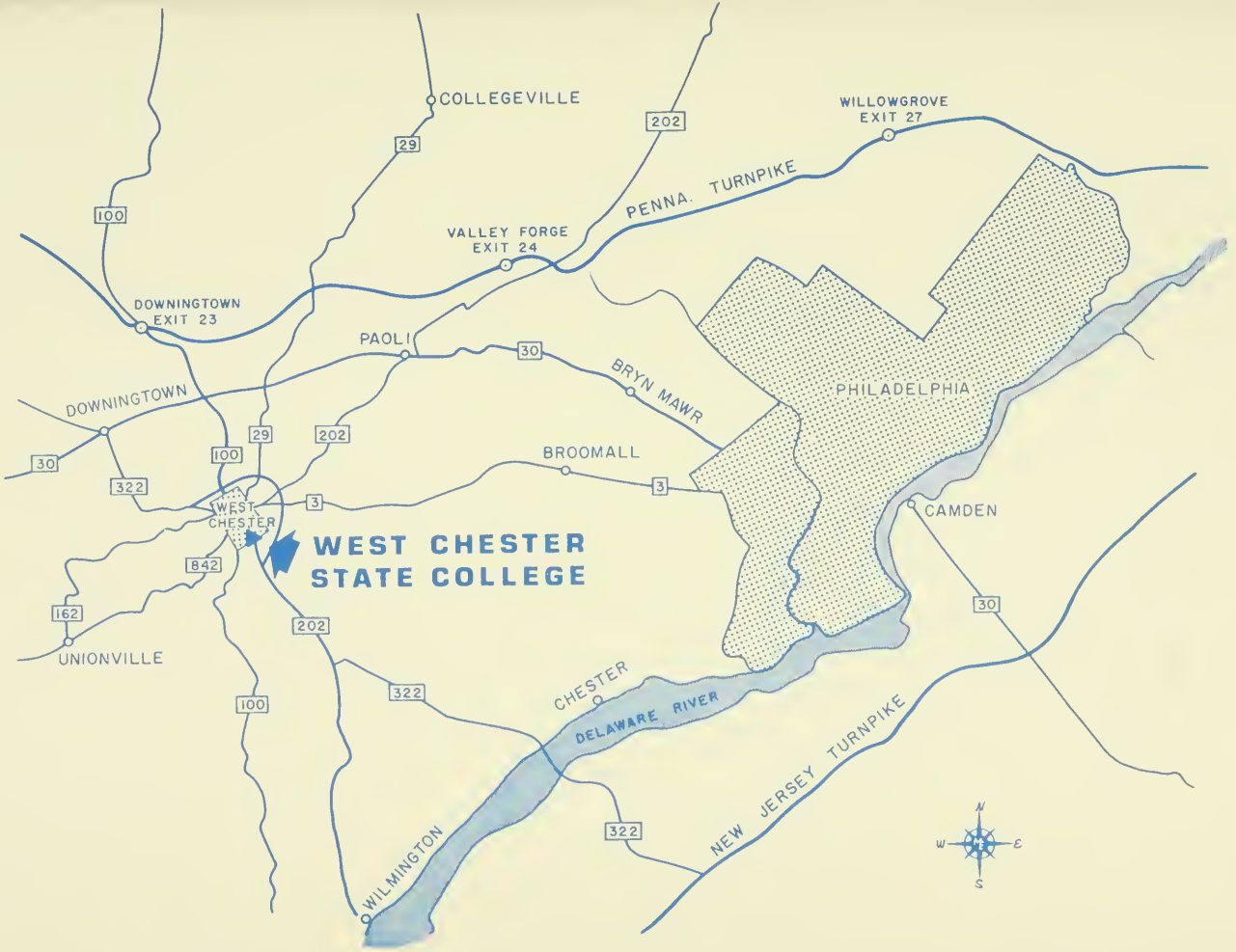
Business: fees, bills, refunds ..... Everett E. Shaefer

Curriculum Matters

- Audio-Visual Education ..... Dr. Richard P. Weagley
- Biology ..... Dr. John Dorchester
- Chemistry ..... Dr. Justo Bravo
- Elementary Education ..... Dr. Charlotte King
- English ..... Dr. Powell S. Thomas
- Foreign Languages
  - French ..... Dr. Alfred Roberts
  - German ..... Mr. Alois H. Kulhanek
  - Latin ..... Dr. Walter E. Frieman
  - Spanish ..... Mr. Ronald P. Lombardi
- Geography ..... Dr. George Langdon
- Guidance & Counseling ..... Dr. Abe Kramer
- Health & Physical Ed. ..... Dr. Edwin L. Youmans
- Mathematics ..... Dr. Albert E. Filano
- Music ..... Mr. Charles A. Sprenkle
- Physical Science ..... Dr. Russell K. Rickert
- Physics ..... Dr. Russel K. Rickert
- Social Science ..... Dr. Edward B. Everett
- Housing
  - Men ..... Dr. Glenn W. Killinger, Dean
  - Women ..... Miss Bernice H. Bernatz, Dean

Library: books, fines, borrowing ..... Mr. Frank Q. Helms
Veteran's Affairs ..... Mrs. Helen Shippee
Registrar ..... Mrs. Helen Shippee
Student Internship ..... Dr. Mark Evans
Placement Services ..... Dr. Edward T. Twardowski
Teacher Education ..... Dr. Harold W. Benda
College Book Store: books, general supplies, caps & gowns ..... Mr. Robert Norris

FOR INFORMATION CALL
WEST CHESTER 692-3210
EXTENSIONS 455, 456, and 457
Area Code 215


COLLEGEVILLE
29
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WILLOWGROVE
EXIT 27
PENNA. TURNPIKE
100
VALLEY FORGE
EXIT 24
DOWNINGTOWN
EXIT 23
PAOLI
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BRYN MAWR
PHILADELPHIA
DOWNINGTOWN
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NEW JERSEY TURNPIKE
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WILMINGTON
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1. ANDERSON HALL
2. BOILER PLANT
3. LABORATORY SCHOOL
4. EHINGER GYMNASIUM
5. FARRELL STADIUM
6. MAINTENANCE GARAGE
7. GOSHEN RESIDENCE HALL
8. OLD LIBRARY ANNEX
9. HOLLINGER FIELD HOUSE
10. PARKING
11. PARKING
12. KILLINGER RESIDENCE HALL
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14. LAWRENCE CENTER (DINING HALL)
15. FRANCIS HARVEY GREEN LIBRARY
16. PARKING
17. ELECTRIC SUBSTATION
18. McCARTHY RESIDENCE HALL
19. OLD GYMNASIUM
20. OLD MAIN
21. PHILIPS MEMORIAL BUILDING
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34. EDUCATIONAL DEVELOPMENT CENTER
35. SPEECH AND HEARING CLINIC
36. SMITH HOUSE
37. PHYSICAL THERAPY CENTER
38. GENERAL STATE AUTHORITY OFFICES
39. PARKING

WEST CHESTER
STATE COLLEGE

Graduate Studies

1969
Summer Sessions

WEST
CHESTER
STATE
COLLEGE
BULLETIN

West Chester, Pennsylvania

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The Middle States Association of Colleges and Secondary Schools

The National Council for Accreditation of Teacher Education

The American Association for Health, Physical Education, and Recreation

The National Association of Schools of Music

Office of Graduate Studies

Second Floor Administration Building
(formerly the Laboratory School)

Summer office hours: 8:00-12 noon
1:00-4:30 p.m.
Monday thru Friday

Telephones: 436-2243 436-2943
436-2659 436-2736
(Area code 215)

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WEST CHESTER STATE COLLEGE BULLETIN

Graduate Studies
Summer Sessions

1969

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VOLUME 97/NUMBER 2 DECEMBER, 1968
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School of Music	Lois M. Williams, *Department of Music History and Literature*
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Faculty Representative elected by the General Faculty	John J. Turner, Jr. *Department of History*

GRADUATE STUDIES

leading to the

MASTER OF ARTS IN

Biology
English
History
Mathematics

MASTER OF SCIENCE IN

Chemistry
Health and Physical Education

CERTIFICATION

and/or the

MASTER OF EDUCATION IN

Biology
Chemistry
Educational Media (Audio-Visual)
Elementary Education
English
French
Geography
German
Guidance and Counseling*
Health and Physical Education
Latin
Mathematics
Music Education
Physical Science
Physics
Social Sciences
Spanish

* For those seeking certification in Guidance and Counseling, the master's degree is required.

Degree programs pending approval by the Department of Public Instruction:

MASTER OF ARTS IN

French
German
Latin
Spanish

MASTER OF ARTS IN MUSIC

MASTER OF MUSIC

MASTER OF SCIENCE IN EDUCATIONAL RESEARCH

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The provisions of this Bulletin are not to be regarded as an irrevocable contract between the student and the College. West Chester State College reserves the right to change any provisions or requirements at any time within the student's term of attendance.

A Brief Look at West Chester State College

West Chester, a multi-purpose college with a student body of more than 5,400 full-time undergraduates, is the second largest link in the system of fourteen institutions of higher learning which the Commonwealth owns and maintains for the youth of Pennsylvania. The College's objectives are to prepare teachers for Pennsylvania's public schools and to provide a liberal arts education for its youth.

West Chester traces its history back to the West Chester Academy, founded in 1812. The College has acquired its present dimensions through changes largely determined as the Commonwealth assumed increasing responsibility for the education of young Pennsylvanians. The institution became West Chester State Normal School in 1871, West Chester State Teachers College in 1927, and West Chester State College in 1962.

West Chester has expanded into North Campus and South Campus, where the new facilities of the School of Health and Physical Education are rapidly taking shape. The widened educational resources of the College include the new Francis Harvey Green Library, with approximately 180,000 volumes; a Learning Research Center, housing a modern laboratory school and a computer center; and the Schmucker Science Center. Four new high-rise residence halls are in use and more are in process. The new Lawrence Center provides dining halls and other student facilities.

The total program at West Chester is comprehensive and designed to satisfy the intellectual, physical, and spiritual needs of all students. A wide span of extracurricular activities affords students opportunities to mingle purposefully with their colleagues and faculty, and to seek the fullest expression of their talents and capacities.

Baccalaureate Degrees Offered

The Bachelor of Science in Education degree is given in four basic curricula—elementary, secondary, music education, and health and physical education—and in one area (speech pathology and audiology) of special education. Degree curricula for public school nurses and dental hygienists are also provided. The College has a program of courses designed to meet certification requirements in the field of safety education and in the special education fields which train for the teaching of mentally retarded and physically handicapped children.

The liberal arts program leads to a Bachelor of Arts degree in arts and letters, social sciences, sciences, mathematics, and music; to the Bachelor of Music; and to the Bachelor of Science in Business Administration.

Location of the College

The College is in West Chester, the county seat of Chester County. With a population of 16,500, West Chester is small enough to have the pleasant aspects of a tree-shaded American town, large enough to contain essential services and the substance of a vigorous community, and old enough to give the student first-hand touch with America's early history.

West Chester was settled largely by members of the Society of Friends in the early years of the eighteenth century. The town retains many charming traces of their culture. Today, West Chester is part of the rapidly growing suburban complex adjoining Philadelphia. Students have abundant opportunities to study local, county, and regional government in an era of dynamic change and growth.

The proximity of Philadelphia (25 miles to the east) and Wilmington (15 miles to the south) puts the libraries, museums, and other cultural and historical resources of the two cities in convenient range. West Chester is near Valley Forge, the Brandywine Battlefield, Longwood Gardens, and other historic attractions of Chester County. The College itself has a rich cultural program, including its All-Star Course, the William Pyle Philips Lecture Foundation series, and the recitals and concerts of its own School of Music.

Program for In-Service Teachers

West Chester maintains an extensive two-track program for teachers in service. One phase is composed of late-afternoon, evening, and Saturday morning courses for those desiring to satisfy various professional needs, including certification requirements. The second phase is the graduate program.

The Graduate Program at West Chester

West Chester's program of graduate studies, introduced in 1959, has grown rapidly in the past decade. The College now offers the Master of Education degree in seventeen disciplines; the Master of Arts degree in biology, English, history, and mathematics; and the Master of Science degree in chemistry and health and physical education.*

Pending approval by the Department of Public Instruction, West Chester, in 1969-1970, will introduce programs leading to the Master of Arts in French, German, Latin, and Spanish; the Master of Science in Educational Research; and the Master of Music and Master of Arts in music.

With the in-service teacher particularly in mind, West Chester has designed its graduate studies for the fall and spring semesters around a schedule of late afternoon, evening, and Saturday morning classes. It is possible to undertake full-time graduate programs during the academic year and the summer sessions.

The total graduate enrollment for the 1968 fall semester was 1,468, of whom 56 were full-time students. Since 1961, nearly 500 graduate students have received the Master of Education degree from the College.

Graduate Annual Catalogue

The annual Graduate Studies catalogue, outlining programs and degree requirements, is available upon request to the Office of Graduate Studies.

* The Master of Arts and Master of Science degree programs were approved by the Department of Public Instruction in 1968-1969.

Graduate Summer Sessions

The twelve-week summer sessions are divided into three periods: the Pre Session of three weeks, the Regular Session of six weeks, and the Post Session of three weeks. The schedule includes courses for graduate students and a number of special offerings for teachers in service.

West Chester has long been known to teachers as an ideal place for summertime study. For its wide area of service, the College provides a modern, progressive, and constantly expanding summer program, which may be pursued under highly favorable conditions. The tree-shaded campus, with its conveniently located buildings, provides a beautiful environment. Various recreational activities include softball, tennis, and swimming. Social hours, when students meet informally with faculty members, are a feature, and Philadelphia, with its historic and scenic interest and its full summer program of art, music, and theater, is a distinct attraction. New York and Atlantic City are within easy access. The famed fountains and outdoor theater at Longwood Gardens are only a few miles from the campus.

Housing

Adequate housing is available for all men and women students during the summer sessions. However, the College is unable to provide housing for married students and their families. After an application for admission to a session has been filed with the Office of Graduate Studies, room reservations, if needed, should be made through a written application to either the Dean of Men or Dean of Women, one week prior to the open-

ing of each session. Rooms may be occupied after 2:00 p.m. on the Sunday preceding each session.

Student Course Load

Credits for the summer sessions may be earned at the rate of one semester hour per week of work. Thus, a student attending all three sessions may earn twelve credits. It is not possible to carry more than one course during the Pre or Post Session. Students are not permitted to carry more than six semester hours of work in the Regular Session unless permission to do so is secured in advance from the Dean of Graduate Studies.

College Regulations

The College regulations which pertain to student procedure and conduct during the academic year at West Chester are also in effect for the three summer sessions.

Enrollment

Courses offered for the summer sessions are contingent upon an adequate enrollment.

Class Meetings

Pre Session. Each class meets Monday evening through Thursday evening for three weeks. The hours for classes are shown on the schedule of offerings. It is not possible for a student to carry more than one course during the Pre Session.

Regular Session. Each class begins on Tuesday and meets once daily—Tuesday through Friday the first week, Monday through Friday the next five weeks. Students are permitted to carry more than six semester hours of work in the Reg-

ular Session only if permission has been secured in advance from the Dean of Graduate Studies.

Post Session. Classes begin on Tuesday (following Registration Day) and meet twice daily—Tuesday through Friday for the first week and Monday through Friday for the second and third weeks. Hours are shown on the schedule of offerings. The hour between 9:30-10:30 a.m. is for rest, library work, or recreation. It is not possible for a student to carry more than one course in this session.

Grading System

The grading system employed in the graduate program is virtually the same as that used in the undergraduate program at West Chester. The graduate grading system is as follows:

Grade	*Interpretation*	*Percentage Equivalents*	*Quality Points*
A	Excellent	A = 90 - 100	4
B	Superior	B = 80 - 89	3
C	Average	C = 70 - 79	2
D	Below average	D = 60 - 69	1
F	Failure	F = 59 or lower	0
I	Incomplete		
WF	Withdrew Failing	F = 59 or lower	0
WP	Withdrew Passing		
W	Withdrew		
Aud	Audit		

The following restrictions are enforced:

1) The student must maintain a general average of at least B.

2) Grades lower than C are not acceptable in satisfying degree requirements.

3) Courses which for some valid reason (such as unavoidable absence during final examinations) are not completed by the end of a given semester must be completed by the end of 90 calendar days, unless the Graduate Council grants an individual exception.

Residence Requirements

All courses given in the graduate program are taught on this campus by members of the Graduate Studies faculty. Therefore, graduate students should not expect to take off-campus or extension courses.

All graduate students planning to receive the master's degree from West Chester State College must take a minimum of two courses during one of the regular summer sessions or be a full-time graduate student during one of the regular College semesters.

This College will accept in transfer only courses taken in residence at other approved graduate schools.

Placement Service

Every year the College Placement Service is notified of many positions of all types on all levels of instruction. Because many of these positions offer unusual opportunities for professional advancement, graduate students are encouraged to use the Placement Service.

All students pursuing graduate work at West Chester are eligible for the use of limited services provided by the Placement Service. Graduate students who have completed less than 15 semester credits have access to the listings of vacancies. Students who hold undergraduate degrees from West Chester or who have completed 15 semester credits of graduate work are eligible for the full services, which include registration, development of a complete set of credentials, and mailing of credentials to prospective employers. There is no charge for the use of the Placement Service.

Fees For Summer Sessions

[Fees are subject to change without notice. All charges for a session must be paid on the day of registration]

Basic Fee

[Check or money order payable to Commonwealth of Pennsylvania]

Graduate students who are legal residents of Pennsylvania—$20 per semester hour of credit.
Graduate students living outside the State—$25 per semester hour of credit.

Housing Fee

The housing fee for resident students is $108 for the Regular Session and $54 for the Pre or Post Session. This fee covers room and meals. A private room is $2 additional per week.

Late Registration Fee

All fees are due and payable on the day of registration, after which a late fee of $10 is charged for failure to complete registration on the designated date.

Car Registration Fee

A car registration fee of 50¢—covering all three sessions—is charged.

Student Activities Fee

[Check or money order payable to Intracollegiate Governmental Association]

Graduate students pay the student activities fee of $3.50 for the Regular Session and $1.75 for the Pre or Post Session.

Resident Council Dues (Men)

[Check or money order payable to Intracollegiate Governmental Association]

Dues of $1 are charged men students living in residence halls during the Regular Session (50¢ for the Pre or Post Session).

Music Fees

In addition to the basic fee, graduate students in music are subject to the following schedule of fees:

Instruction

Piano, Organ, Instrument or Voice one-hour lesson each week	$55 per semester
Instrument Class or Ensemble 2 hours per week	$35 per semester

Rentals

Any Band or Orchestra Instrument (minimum charge—$3)	$1 per week

Practice Time

Piano Room two hours per day (minimum charge—$3)	$1 per week
Organ room two hours per day (minimum charge—$4.50)	$1.50 per week

Instrumental Room

2 hours per day (minimum charge—$1.50)	50¢ per week

Refunds

No portion of the basic fee shall be refunded if the student has attended one-third or more than one-third of the class periods scheduled during a given session.

If a student withdraws from a course, for approved reasons, before one-third of the scheduled class periods have been completed, he shall then be entitled to a refund of one-half of the fees paid.

If a student registers for a course and then withdraws before attending *any* of its classes, he will receive a receive a refund of all but $10.

Requests for refunds must be made in writing to the Office of Business Affairs.

Refunds will not be made to students who are suspended or dismissed or who drop courses without the approval of the Dean of Graduate Studies.

Procedures Prior to Registration

Students wishing to register (**see note below**) for any of the three summer sessions must report to the Office of Graduate Studies to secure a "Permit to Register" card and a Blue Registration Card. Separate cards must be secured for each session. They may be obtained during the following periods:

Pre Session	May 1 thru May 23
Regular Session	June 9 thru June 13
Post Session	July 28 thru August 1

NO ONE WILL BE PERMITTED TO REGISTER WITHOUT THE "PERMIT TO REGISTER" CARD

Note well: Unless a student has made proper application to the Office of Graduate Studies (white application form, transcripts delivered to the Office, matriculation fee paid) and unless he has been accepted by his major department, he will not be permitted to register for graduate courses. There are no exceptions. It is the graduate student's responsibility to comply with all rules and regulations of the College.

STUDENTS WHO HAVE NOT COMPLIED WITH THE APPLICATION AND REGISTRATION PROCEDURES OF THE COLLEGE WILL NOT BE GIVEN CREDIT FOR A COURSE.

Registration Procedures Summer-1969

Students select their registration day or hour according to the first letter of their last name.

Pre Session Registration

4:30-7:00 p.m.

Monday, May 26 A thru K

Tuesday, May 27 L thru Z

Classes begin Monday, June 2—end at close of classes Thursday, June 19

Regular Session Registration

1:30-4:30 p.m.

Tuesday, June 17 L thru Z

Wednesday, June 18 A thru K

Classes begin Tuesday, June 24—end at close of classes Friday, August 1

Post Session Registration

Monday, August 4

8:00-11:00 a.m. A thru K

1:30-3 p.m. L thru Z

Classes begin Tuesday, August 5—end at close of classes Friday, August 22

All late registrations are held in the Office of Graduate Studies — late fee: $10.

Registration will take place in the following rooms for all three summer sessions:

Anderson Hall—Ground Floor

Educational Media (Audio-Visual)	17

Anderson Hall—First Floor

Elementary Education	101, 103, 105, 107, 109
Guidance and Counseling	114, 116
Secondary Education and Professional Studies	115
Special Education	117
Urban Education	115

Anderson Hall—Second Floor

Geography	201
Mathematics	213

Anderson Hall—Third Floor

English	300A
Social Sciences	312

Recitation Hall

Foreign Languages	116

Schmucker Science Center

Biology	109
Chemistry	131
Philosophy	205
Physical Science	151

Swope Hall

Music	5

106 West Rosedale Avenue

Health and Physical Education

Pre Session

JUNE 2—19, 1969

Classes begin Monday, June 2, 1969. Monday through Thursday for three weeks

6:00-8:30 p.m. (2-credit courses)
6:00-9:30 p.m. (3-credit courses)

REQUIRED COURSE—ALL M.Ed. CURRICULA

EdF 510—Educational Foundations (3)
Section 1 (Staff)
Section 2 (Staff)
Section 3 (Staff)
Section 4 (Staff)

BIOLOGY (3 credits)

Bio 524—Experimental Biology — Dr. Dorchester
Bio 543—Freshwater Invertebrates — Mr. McDonnell

CHEMISTRY

Che 511—Advanced Inorganic Chemistry (3) — Dr. Bravo

EDUCATION [EDUCATIONAL MEDIA] (AUDIO-VISUAL)

EdM 505—The Motion Picture in Education (2) — Mr. Spiecker
EdM 508—Audio-Visual Materials in the Elementary School Curriculum (2) — Dr. McTavish
EdM 521—Production of Non-Projected Materials (3) — Mr. Steinmetz

EDUCATION [ELEMENTARY]

EdE 505—The Teacher in the Elementary School (2) — Mr. Herres
EdR 510—Foundations of Reading Instruction (3) — Mrs. Chern
EdR 514—Reading in the Content Areas (3) — Mrs. Haas
EdE 522—Teaching the Communication Skills (2) — Mr. Peta
EdE 525—Curriculum and Research in the Language Arts (2) — Mrs. Kulp
EdE 545—The Kindergarten-Primary Program (2) — Miss Good
EdE 565—Effective Classroom Management (2) — Mr. Gibson

EDUCATION [GUIDANCE AND COUNSELING]

EdC 503—Principles and Techniques of Guidance (2) Dr. Hill
EdC 540—Evaluative Methods in Guidance (3) Mr. Greenberg
EdC 562—Organization and Administration of the Guidance Program (2) Dr. Kramer

EDUCATION [SECONDARY EDUCATION AND PROFESSIONAL STUDIES]

EdF 509—Contemporary Teaching Trends (2) Dr. Benda
EdF 590—School Law (2) Mr. Barth

EDUCATION [SPECIAL EDUCATION]

EdA 571—Psychology of the Child with Learning Disabilities (2) Staff

ENGLISH (2 credits)

Eng 504—Linguistics for the Elementary School Mr. Page
Lit 516—Major 20th Century American Poets Dr. Garrett
Lit 522—Chaucer Dr. Thomas

FOREIGN LANGUAGES (3 credits)

Fre 522—Voltaire and Rousseau Dr. Roberts
Ger 514—Advanced Grammar and Composition (German) Mr. Kulhanek
Spa 510—Advanced Spanish Phonetics Mr. Lombardi

GEOGRAPHY (3 credits)

Geo 501—Geomorphology Dr. Keinard
Geo 520—Problems of Economic Geography Mr. Thompson

HEALTH AND PHYSICAL EDUCATION (3 credits)

PEd 531—Adapted Physical Education Dr. Norris
PEd 562—Administrative and Supervisory Practices in Health and Physical Education and Athletics Dr. Cottrell
PEd 564—Biodynamics of Human Performance Mr. Lorback
PEd 570—Curriculum Development in Health and Physical Education Dr. Youmans
PEd 571—Comparative Physical Education Dr. Sturzebecker
PEd 580—History and Philosophy of Safety Education Dr. Mitten

MATHEMATICS (2 credits)

Mat 552—Manipulative Devices and Other Aids for Teaching Secondary School Mathematics Mr. Weiss

Mat 555—Modern Techniques of Teaching Elementary School Mathematics Staff

MUSIC (2 credits)

Mus 513—Music Education in the Elementary School Mr. Pflieger

Mus 572—Vitalizing Music in the Elementary Grades (Elementary Curriculum Elective) Dr. Carey

PHYSICAL SCIENCE

PhS 532—Space Science (3)
(Abington School District: June 16-27)

A workshop taught by NASA personnel and open to teachers (K-9).

Request brochure and application form from Dr. Russell K. Rickert, Chairman, Department of Physics.

PhS 590—History of Physical Science (3) Dr. Rickert

SOCIAL SCIENCES

His 513—Emergence of Modern America, 1876-1919 (2) Dr. Riley

His 534—French Revolution and the Napoleonic Era, 1789-1815 (2) Dr. Swan

Soc 531—Social Pathology (3) Dr. Samuelson

Regular Session

JUNE 24—AUGUST 1, 1969

Classes meet Tuesday through Friday the first week and Monday through Friday thereafter. Two-credit courses meet one hour daily and three-credit courses meet 1½ hours daily.

[Except for three afternoon listings under Music, all hours are a.m.]

REQUIRED COURSE—ALL M.Ed. CURRICULA

8:00

EdF 510—Educational Foundations (3)
Section 1—(Staff)
Section 2—(Staff)

9:30

EdF 510—Educational Foundations (3)
Section 3—(Staff)
Section 4—(Staff)

11:00

EdF 510—Educational Foundations (3)
Section 5—(Staff)
Section 6—(Staff)

BIOLOGY

8:00

Res 500—Methods and Materials of Research* (2) Dr. Berry
Bio 503—Modern Techniques of Teaching Biology (2) Mr. Skillen

9:30

Bio 539—Insect Morphology (3) Mr. McDonnell

11:00

Bio 527—Biochemistry II (3) Dr. Dorchester

* Except by permission, only for students in biology, chemistry, English, geography, and physical science.

CHEMISTRY

8:00

Res 500—Methods and Materials of Research* (2) — Dr. Berry

11:00

Che 571—Polymer Chemistry (3) — Dr. Medeiros
Lab 1:00-4:00 p.m. (Mondays)

EDUCATION [EDUCATIONAL MEDIA] (AUDIO-VISUAL)

8:00

EdF 500—Methods and Materials of Research (2)
Section 1 — Dr. Hill
EdM 560—Organization and Administration of the Educational Media Program (2) — Staff

9:30

EdF 500—Methods and Materials of Research (2)
Section 2 — Dr. Higgins
EdM 502—Selection and Effective Utilization of Educational Media (2) — Mr. Redmond
EdM 519—Library Science (2) — Staff
EdM 555—Learning Theories Related to Educational Media (2) — Dr. McTavish

11:00

EdM 501—Orientation to Educational Media (3) — Dr. McTavish
EdM 523—Production of Projected Still Materials (3) — Dr. Weagley
EdM 525—Photography for Teachers (3) — Mr. Redmond

EDUCATION [ELEMENTARY]

8:00

EdR 510—Foundations of Reading Instruction (3)
Section 1 — Staff
EdE 547—Elementary School Curriculum (2)
Section 1 — Mr. Herres
EdE 553—Child Development and Behavior II (3) — Mrs. Kulp
EdE 561—Guidance in the Elementary School (3) — Mr. Gibson
EdF 500—Methods and Materials of Research (2)
Section 1 — Dr. Hill

* Except by permission, only for students in biology, chemistry, English, geography, and physical science.

9:30

EdE 530—Social Studies in Elementary Education (2) Dr. Ross
EdE 532—Social Studies Curriculum and Instruction (2) Mrs. Haas
EdE 547—Elementary School Curriculum (2) Section 2 Mr. Herres
EdF 500—Methods and Materials of Research (2) Section 2 Dr. Higgins
EdR 521—Practicum: Introduction to Diagnostic Techniques (3) Staff
EdR 522—Practicum: Advanced Diagnostic Techniques (3) Staff

An additional period (1:30-4:00 p.m.) will be individually scheduled for one day a week for EdR 521 and 522.

11:00

EdE 501—Introduction to Graduate Study in Elementary Education (2)
Section 1 Mr. Habecker
Section 2 Mrs. Kulp
EdR 510—Foundations of Reading Instruction (3) Section 2 Staff
EdR 514—Reading in the Content Areas (3) Mrs. Haas
EdE 551—Child Development and Behavior I (3) Mr. Gibson

EDUCATION [GUIDANCE AND COUNSELING]

8:00

EdE 553—Child Development and Behavior II (3) Mrs. Kulp
EdE 561—Guidance in the Elementary School (3) Mr. Gibson
EdF 500—Methods and Materials of Research (2) Section 1 Dr. Hill

9:30

EdC 540—Evaluative Methods in Guidance (3) Mr. Greenberg
EdC 556—Occupational, Educational, and Social Information in Guidance (2) Mr. Paganelli
EdC 570—Principles and Techniques of Counseling (2) Dr. Kramer
EdF 500—Methods and Materials of Research (2) Section 2 Dr. Higgins

11:00

EdC 503—Principles and Techniques of Guidance (2) Mr. Swiren
EdC 600—Research Report (1-2) (By appointment) Dr. Hill
EdC 610—Thesis (3) (By appointment) Dr. Hill

(For courses in Psychology, see Social Sciences)

EDUCATION [SECONDARY EDUCATION AND PROFESSIONAL STUDIES]

9:30

EdF 521—Contemporary British Education (3)* — Staff
EdF 523—Education Behind the Iron Curtain (3)* — Mr. Deischer
EdF 550—Advanced Educational Psychology (3) — Mr. Recktenwald

11:00

EdS 502—Secondary School Curriculum (2) — Dr. Ridley
EdS 524—Supervision of Student Teaching (3) — Dr. Evans
EdF 504—Middle School Workshop (4) — Mr. Good
(June 24-July 11 9:00-12:00 noon)
EdX 610—Classroom Teachers Workshop (2) — Staff
(July 7-July 18 Open to Conference delegates only)

EDUCATION [SPECIAL EDUCATION]

8:00-12:00

EdA 540—Summer Workshop in Special Education (4) — Mr. Freeman

8:00

EdA 570—Psychology of the Mentally Atypical Child (2) — Dr. Feldman

EDUCATION [URBAN]

8:00

EdU 501—Curricular Adaptations for the Culturally Disadvantaged (3) — Mr. Leeds

ENGLISH (2 credits each)

8:00

Hum 500—Humanities — Dr. Garrett / Dr. Mitchell
Lit 538—Hawthorne and Melville — Dr. Bailey
Res 500—Methods and Materials of Research** — Dr. Berry

9:30

Eng 501—Modern Techniques for the Teaching of English — Dr. Bailey
Lit 542—Spenser — Dr. Jordan

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* Contingent upon approval of arrangements.

** Except by permission, only for students in biology, chemistry, English, geography, and physical science.

11:00

Lit 502—History of the English Language — Mrs. Nechas
Lit 531—Shakespeare's Predecessors in Drama — Dr. McKenty
Lit 533—Romantic Prose and Poetry — Staff

FOREIGN LANGUAGES

(3 credits each unless otherwise specified)

8:00-1:00

FLES Institute (6) — Staff

Following courses open only to those participating in FLES Institute (June 24 through August 1).
Lan 501 Linguistics (2)
Lan 502 FLES (2)

In addition, two credits may be granted in French or Spanish Culture and Civilization or in Advanced Grammar and Composition. Request additional information from Mr. Ralph A. Eisenstadt, Department of Foreign Languages, West Chester State College, West Chester, Pa. 19380.

9:30

Fre 530—French Classical Tragedy — Dr. Roberts

11:00

Spa 520—Cervantes — Staff
Lat 525—Latin Metre and Verse — Dr. Frieman
Ger 542—Modern German Novel — Mr. Kulhanek

GEOGRAPHY

(3 credits each unless otherwise stated)

8:00

Geo 529—Geographic Influences in World History — Mr. Grassel
Geo 544—Geography of South America — Dr. Langdon
Res 500—Methods and Materials of Research* (2) — Dr. Berry

9:30

Geo 505—Advanced Physical Geography — Dr. Keinard
Geo 585 and Geo 586—Combination Geography Field Study Courses (6)

Students must enroll in both of the following courses, since they are designed to complement each other:

Geo 585—Geography Field Methods — Mr. Bielski
Geo 586—Area Field Studies in Geography (This course meets at 11:00) — Mr. Thompson

Wednesday sessions will be devoted to field trips and

* Except by permission, only for students in biology, chemistry, English, geography, and physical science.

will continue into the afternoons.

Since it will be necessary to limit class size and arrange for transportation and other facilities, students interested in the program should get in touch with Mr. Andrew Thompson, of the Department of Geography, for early enrollment.

11:00

Geo 580—Seminar in Geography in Education — Mr. Grassel
Geo 586—SEE ABOVE

HEALTH AND PHYSICAL EDUCATION
(3 credits each unless otherwise stated)

8:00

PEd 500—Methods and Materials of Research in Health and Physical Education (2) — Dr. Youmans
HEd 540—School Health Problems — Dr. Sheets
PEd 563—Scientific Measurement and Instrumentation (2) — Mr. Steinmetz
PEd 582—Problems in Traffic and Driver Education — Dr. Mitten

9:30

PEd 502—Elementary Physical Education Workshop (2) — Mr. Wilkinson
PEd 530—Scientific Bases for Physical Education — Dr. Norris
PEd 561—Statistics in Health and Physical Education — Mr. Lorback
PEd 591—Non-Thesis Seminar I (1) — Dr. Cochran / Dr. Young
PEd 592—Non-Thesis Seminar II (1) — Dr. Sturzebecker / Mr. Steinmetz

11:00

PEd 520—Scientific Coaching — Mr. Lorback
PEd 550—Historical and Philosophical Bases for Health and Physical Education — Dr. Sturzebecker
PEd 551—Seminar: Professional Literature — Dr. Norris
PEd 572—The Child and Physical Education — Dr. Cochran

By appointment:

PEd 593—Thesis Seminar (2) — Staff
PEd 610—Thesis (3) — Staff

MATHEMATICS
(3 credits each unless otherwise stated)

8:00

Mat 501—Fundamental Concepts of Mathematics I — Mr. Bell
Mat 505—Theory of Sets — Mr. Moser

9:30

Mat 530—Geometry for the Elementary Grades — Dr. Montemuro
Mat 547—Complex Variable — Dr. Manning

11:00

Mat 514—Theory of Numbers — Mr. Branton
Mat 551—Teaching Secondary School Mathematics to the Low Achiever (2) — Mr. Weiss
CSc 501—Introduction to Computer Programming — Mr. Fasnacht

MUSIC (2 credits each unless otherwise stated)

8:00

Hum 500—Humanities — Dr. Garrett / Dr. Mitchell
Mus 500—Methods and Materials of Research — Mr. Sprenkle
Mus 595—Aspects of Musical Styles I (3) — Dr. Thomson

9:30

Mus 511—Administration of Public School Music — Dr. Carey
Mus 523—Advanced Band Arranging — Dr. Wright
Mus 546—Piano Ensemble and Master Class — Mr. Whitten
Mus 586—Vocal Diction — Dr. Cheesman
Mus 590—Study and Appreciation of the Symphony (Open to all curricula) — Dr. Johns

10:30

Mus 507—Vocal Literature — Mr. Sweet
Mus 514—Pedagogy of Music Theory — Dr. Wilkinson
Mus 519—Music Appreciation in the General Music Program — Dr. Antonowich

11:30

Mus 503—Advanced Choral Conducting — Mr. Sweet
Mus 560—Study and Appreciation of the Opera (Open to all curricula) — Mr. Middleton
Mus 566-9—Ensemble and/or Orchestra (1) — Dr. Johns
Mus 584—Seminar in Piano Teaching and Teaching Materials — Mr. Carl

1:00

Mus 525—Woodwind Literature — Mr. Carson
Mus 576—Opera Workshop — Mr. Sweet

2:00

Mus 504—Advanced Instrumental Conducting — Mr. Middleton
Mus 536-9—Vocal Ensemble and/or Chorus (1) — Mr. Sweet

3:00

Mus 566-9—Ensemble and/or Band (1) — Mr. Carson

By appointment

Mus 531-5—Advanced Voice (1-2) — Staff
Mus 541-5—Advanced Piano or Organ (1-2) — Staff
Mus 561-5—Advanced Instruments (1-2) — Staff

PHILOSOPHY

11:00

Phi 510—Existentialism (3) — Mr. Banyacski

PHYSICAL SCIENCE

(3 credits each unless otherwise stated)

8:00

PhS 503—Principles of Physical Geology — Dr. Greenberg
PhS 570—Chemistry for the Elementary Teacher — Mr. Casciato
Res 500—Methods and Materials of Research* (2) — Dr. Berry

9:30

PhS 512—Mechanics for Teachers (Lab to be arranged) — Mr. Smith
Sci 595—Elementary Science Curriculum and Instruction — Mr. Widick

11:00

PhS 520—Earth Science for Secondary School Teachers — Dr. Greenberg

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* Except by permission, only for students in biology, chemistry, English, geography, and physical science.

SOCIAL SCIENCES

(2 credits each unless otherwise stated)

8:00

His 508—Colonial America, 1607-1763	Dr. Kay
His 536—Europe Since 1914	Mr. Soldon
Psy 563—Mental Hygiene	Dr. Williams
Soc 532—Historical Sociology (3)	Dr. Samuelson

9:30

Eco 531—Comparative Economic Systems (3)	Dr. Thorson
His 514—U.S. as a World Power, 1919-Present	Dr. Everett
His 535—Nationalism and Democracy, 1815-1914	Dr. Schalck
Psy 554—Seminar, Adolescent Case Studies (3)	Mr. Rahn

11:00

His 524—Studies in the History and Culture of South Asia (3)	Mr. Young
PSc 532—Seminar in International Relations (3)	Dr. Harding
Psy 501—Introductory Statistics for the Behavioral Sciences	Dr. Morse
Psy 562—Psychology of Personality	Dr. Sands
SSc 500—Methods and Materials of Research in the Social Sciences	Dr. Everett

SSc 550—Seminar in Contemporary European Culture (6)
(Student European Tour)
For information contact:
Dr. Robert E. Carlson
Chairman, Department of History

NATIONAL SCIENCE FOUNDATION SUMMER INSTITUTE IN MATHEMATICS

Foundations of Algebra for Junior High School Teachers

Foundations of Geometry for Junior High School Teachers

Seminar in Teaching of Junior High School Mathematics

Admission to this program, which takes place during the Regular Session, is limited to those granted National Science Foundation stipends. For further information contact Dr. Albert E. Filano, Chairman, Department of Mathematics. The deadline for submission of application is February 15, 1969.

Post Session

AUGUST 4, 1969—AUGUST 22, 1969

Classes begin Tuesday, August 5, for the first week. Classes meet Monday through Friday for for the second and third weeks.

Three-credit courses meet from 8:00-9:30 a.m. and from 10:30-12 noon.

Two-credit courses meet from 8:00-9:00 a.m. and from 10:00-11:00 a.m.

REQUIRED COURSE—ALL M.Ed. CURRICULA

EdF 510—Educational Foundations (3) — Staff

BIOLOGY

Bio 542—Animal Ecology (3) — Mr. McDonnell

EDUCATION [EDUCATIONAL MEDIA] (AUDIO-VISUAL)

EdM 523—Production of Projected Still Materials (3) — Dr. Weagley
EdM 533—Television in Education (3) Section 1 — Dr. Strayer
EdM 533—Television in Education (3) Section 2 — Mr. Redmond

EDUCATION [ELEMENTARY]

EdR 516—Reading Disabilities (2) — Mrs. Chern
EdE 553—Child Development and Behavior II (3) — Mr. Gibson
EdE 560—Meeting Individual Needs of Children (2) — Staff

EDUCATION [GUIDANCE AND COUNSELING]

EdC 503—Principles and Techniques of Guidance (2) — Mr. Greenberg
EdC 600—Research Report (1-2) (By appointment) — Dr. Hill
EdC 610—Thesis (3) (By appointment) — Dr. Hill
(For courses in Psychology, see Social Sciences)

EDUCATION [SECONDARY EDUCATION AND PROFESSIONAL STUDIES] (2 credits)

EdS 506—The Junior High School — Staff

EdS 566—The Activity Program in the Secondary School — Mr. Barth

EDUCATION [URBAN EDUCATION]

EdU 502—Human Relations and the Community (3) — Mr. Leeds

ENGLISH (2 credits)

Lit 514—American Literary Movements — Dr. Berry

Lit 532—Shakespeare — Dr. Haviland

Lit 550—Literature for the Elementary School — Mrs. Jane Smith

GEOGRAPHY (3 credits)

Geo 523—Conservation of Natural Resources Workshop — Mr. Holingjak

Geo 541—Geography of the U.S. in its World Relations — Dr. Keinard

Geo 586—Area Field Study in Hawaii — Dr. Langdon

Students interested in this course should contact Dr. George L. Langdon, Department of Geography, early, for details and reservations.

HEALTH AND PHYSICAL EDUCATION (3 credits each unless otherwise stated)

PEd 510—School and Community Recreation — Mr. Davis

PEd 534—Modern Principles of Athletic Training (2) — Mr. Donley

HEd 565—Scientific Bases for Health — Dr. Bruess

PEd 583—Psychology in Safety Education and Accident Prevention — Dr. Mitten

MATHEMATICS (2 credits each unless otherwise stated)

Mat 501—Fundamental Concepts of Mathematics I (3) — Staff

Mat 521—Educational Statistics I — Staff

Mat 556—Development of the Mathematics Curriculum in the Elementary Grades — Dr. Montemuro

MUSIC (2 credits each unless otherwise stated)

Mus 501—Advanced Class Instruction in Percussion Mr. Goebel
Mus 510—Current Trends in Music Education Dr. Antonowich
Mus 585—String Literature and Pedagogy Dr. Johns
Mus 588—Research Seminar (1) (By appointment) Mr. Sprenkle
Mus 600—Research Report (1) (By appointment) Mr. Sprenkle
Mus 610—Thesis (3) (By appointment) Staff

PHYSICAL SCIENCE

PhS 502—Modern Trends in Teaching Physical Science (2) Dr. Rickert
PhS 562—General Geologic Field Studies in Southeastern Pennsylvania (3) Dr. Greenberg
PhS 523—Resource Material in Elementary Science (3) Mr. Widick
PhS 571—Astronomy for the Elementary Teacher (3) Mr. Reed

SOCIAL SCIENCES

(3 credits each unless otherwise stated)

His 509—Revolutionary America, 1763-1789 (2) Dr. Turner
His 540—Evolution of Modern Russia Dr. Swan
Soc 533—Intergroup Relations Mr. Morning
PSc 531—Modern Political Theory Mr. Burns
Psy 552—Seminar in Human Development: Adolescence Staff

West Chester State College Bulletin
WEST CHESTER, PENNSYLVANIA 19380

SUMMER SESSIONS
GRADUATE STUDIES

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